SPECIFICATIONS

ITEM	DESCRIPTION
16.1	STANDARDS AND CODES: ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2014 LOS ANGELES COUNTY ELECTRICAL CODE, 2013 CALIFORNIA ELECTRICAL CODE AND 2011 NATIONAL ELECTRICAL CODE (NEC), AS WELL AS ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES. THIS DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING WORK SHOWN OR SPECIFIED WHICH MAY EXCEED THE REQUIREMENTS OF SUCH ORDINANCES, LAWS, REGULATIONS AND CODES.
16.2	COMPLETE INSTALLATION: PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, ACCESSORIES, ETC., NECESSARY TO ACCOMPLISH A COMPLETE ELECTRICAL SYSTEM IN ACCORDANCE WITH THE PLANS TOGETHER WITH THE SPECIFICATIONS.
16.3	PERMITS: OBTAIN AND PAY FOR ALL BUILDING AND WORKING PERMITS AND INSPECTION FEES REQUIRED FOR THIS PROJECT.
16.4	DRAWINGS: DATA PRESENTED ON THESE DRAWINGS SHALL BE FIELD VERIFIED SINCE ALL DIMENSIONS, LOCATIONS, AND LEVELS ARE GOVERNED BY ACTUAL FIELD CONDITIONS. REVIEW ALL ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL AND SPECIALTY SYSTEMS DRAWINGS AND ADJUST ALL WORK TO MEET THE REQUIREMENTS ON CONDITIONS SHOWN THEREON, DO NOT SCALE ELECTRICAL PLANS FOR FIXTURE, DEVICE OR APPLIANCE LOCATIONS. USE CONFIGURED DIMENSIONS IF GIVEN OR CHECK ARCHITECTURAL OR MECHANICAL DRAWINGS.
16.5	COPYRIGHT: THESE PLANS, SPECIFICATIONS AND ALL RELATED ADDENDA AND DOCUMENTS CONSTITUTE COPYRIGHT MATERIALS OF JP ENGINEERING. ALL RIGHTS CONFERRED BY THE COPYRIGHT AND SIMILAR LAWS ARE RESERVED TO JP ENGINEERING. THESE MATERIALS SHALL REMAIN THE SOLE PROPERTY OF JP ENGINEERING AND MAY NOT BE REPRODUCED, DISTRIBUTED TO OTHERS OR USED FOR ANY PURPOSE WHATSOEVER WITHOUT THE PRIOR WRITTEN CONSENT OF JP ENGINEERING.
16.6	LOCATIONS: INDICATED LOCATIONS OF ALL OUTLETS AND EQUIPMENT ARE SUBJECT TO CHANGE. SHIFT/RELOCATE/RECONFIGURE ANY OUTLET, EQUIPMENT OR CONNECTION POINT UP TO 10' AS DIRECTED BY ENGINEER, AT NO ADDED COST.
16.7	RECORD DRAWINGS: CONTRACTOR SHALL PROVIDE, PRIOR TO FINAL ACCEPTANCE AND OBSERVATION, ONE SET OF REVISED RECORD ELECTRICAL CONSTRUCTION DOCUMENTS ON REPRODUCIBLE MEDIUM INDICATING THE FOLLOWING ADDITIONAL INFORMATION: EXACT ROUTING OF ALL CONDUITS LARGER THAN 1" EXACT LOCATION OF ALL SERVICE GROUNDING/BONDING CONNECTIONS CONTRACTORS NAME, ADDRESS AND TELEPHONE NUMBER RECORD NOTATIONS SHALL BE CLEARLY DRAWN AT A DRAFTING APPEARANCE EQUAL TO THE ORIGINAL DRAWINGS. CONTRACTOR SHALL ALSO PROVIDE ALL OPERATING AND MAINTENANCE MANUALS PRIOR TO FINAL PAYMENT.
16.8	EXAMINATION OF SITE AND EXISTING CONDITIONS: BEFORE SUBMITTING A PROPOSAL, CONTRACTOR SHALL EXAMINE THE SITE AND FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AND LIMITATIONS. NO EXTRAS WILL BE ALLOWED BECAUSE OF THE CONTRACTOR'S MISUNDERSTANDING OF THE AMOUNT OF WORK INVOLVED OR HIS LACK OF KNOWLEDGE OF ANY SITE CONDITIONS WHICH MAY AFFECT HIS WORK. ANY APPARENT VARIANCE OF THE DRAWINGS OR SPECIFICATIONS FROM THE EXISTING CONDITIONS AT THE SITE SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER BEFORE SUBMITTING A PROPOSAL.
16.9	EXISTING OUTLETS: EXISTING OUTLETS AND CIRCUITING NOT IN CONFLICT WITH NEW CONDITIONS SHALL REMAIN. EXTEND OUTLETS TO NEW SURFACES, CAULK AND PROVIDE JUMBO PLATES AS REQUIRED TO PRESENT A SERVICEABLE AND FINISHED APPEARANCE.
16.10	EXISTING SWITCHGEAR: REUSE EXISTING SWITCHGEAR AND PANELS IN PLACE WHERE SO INDICATED. MODIFY AS REQUIRED TO ACCOMMODATE NEW WORK. PROVIDE NEW CIRCUIT BREAKERS AND/OR FUSES AS REQUIRED. REARRANGE EXISTING CIRCUITS WITHIN PANELS TO AGREE WITH NEW PANEL SCHEDULES. TRACE AND IDENTIFY ALL EXISTING CIRCUITS ON NEW RECORD PANEL SCHEDULES.
16.11	DEMOLITION: PROVIDE COMPLETE ELECTRICAL DEMOLITION: REMOVE EXISTING OUTLETS AND EQUIPMENT IN CONFLICT WITH NEW CONDITIONS. EXISTING CONDUITS REMOVED FROM SERVICE MAY BE ABANDONED IN PLACE IF IN A CONCEALED LOCATION. REMOVE ALL WIRE FROM ABANDONED RACEWAYS. CONTRACTOR SHALL INSURE CONTINUITY OF EXISTING CIRCUITING PASSING THROUGH DEMOLITION AREAS. EXTEND AND/OR RELOCATED AS NECESSARY. SHIFT/RELOCATE EXISTING EQUIPMENT AND CIRCUITING AS REQUIRED TO ACCOMMODATE NEW WORK.
16.12	SALVAGE: ALL EXISTING EQUIPMENT REMOVED DURING THE COURSE OF THIS PROJECT SHALL BE OFFERED TO OWNER FOR SALVAGE. ANY EQUIPMENT SELECTED BY OWNER SHALL BE DELIVERED TO OWNER ON SITE. ALL REMAINING EQUIPMENT BECOMES THE PROPERTY OF THIS CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.
16.13	TESTING: PRIOR TO PLACING IN SERVICE, ALL ELECTRICAL SYSTEMS SHALL BE TESTED FOR OPENS, GROUNDS, AND PHASE ROTATION. THE MAIN SERVICE GROUND AND ALL LOCAL TRANSFORMER MADE GROUNDS SHALL BE MEGGER-TESTED.
16.14	GROUNDING: TEST EXISTING SERVICE NEUTRAL FOR ADEQUACY AND FOR GROUND CONTINUITY. GROUND ALL EQUIPMENT AND SYSTEM NEUTRAL IN ACCORDANCE WITH ARTICLE 250 OF THE NEC. EQUIPMENT GROUNDS HAVE NOT BEEN SHOWN ON DRAWINGS – WHERE GROUND WIRES HAVE BEEN SHOWN THEY INDICATE AN INSULATED GROUND. THE FOLLOWING SHALL NOT BE USED AS GROUNDING ELECTRODES: METAL UNDERGROUND GAS PIPE SYSTEM AND/OR ALUMINUM ELECTRODES.
16.15	EQUIPMENT STANDARDS: ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND OF THE HIGHEST QUALITY AVAILABLE ("SPECIFICATION GRADE"). SERVICE EQUIPMENT SHALL BE FACTORY-ASSEMBLED COMMERCIAL-GRADE, CONFIGURED PER SERVING UTILITY STANDARDS. WIRING DEVICES SHALL BE SPECIFICATION GRADE WITH NYLON PLATES, WHITE UNLESS OTHERWISE NOTED, RAISED STEEL BOX COVERS MAY BE USED IN UTILITY AREAS. ALL ELECTRICAL EQUIPMENT SHALL BE LISTED BY UL OR A LOS ANGELES COUNTY APPROVED THIRD PARTY TESTING FACILITY PER SECTION 110.3(b).
16.16	MATCH EXISTING: EXISTING EQUIPMENT AND SYSTEMS SHALL BE CONSIDERED A MINIMUM STANDARD TO BE MET, IF NOT OTHERWISE EXCEEDED BY THESE PLANS AND SPECIFICATIONS. NEW MATERIALS AND EQUIPMENT SHALL MATCH EXISTING IN APPEARANCE AND FUNCTION.
16.17	TAMPER-PROOF: ALL EQUIPMENT AND CIRCUITING ACCESSIBLE BY THE PUBLIC SHALL BE TAMPER-PROOF AND VANDAL RESISTANT. OPENABLE DEVICES AND EQUIPMENT SHALL BE PADLOCKABLE.
16.18	CIRCUITING: ALL WIRING SHALL BE IN CONDUIT, CONCEALED EXCEPT WHERE NOTED. EMT WITH STEEL SET SCREW INSULATED-THROAT FITTINGS MAY BE USED IN DRY, PROTECTED INTERIOR LOCATIONS. PVC SCHEDULE 40 SHALL BE USED BELOW GRADE AT MINIMUM -24". WRAPPED RIGID ELBOWS AND RISERS SHALL BE USED FOR ALL THROUGH-GRADE TRANSITIONS AND STUB-UPS. RGS OR IMC CONDUIT WITH THREADED FITTINGS SHALL BE USED IN ALL LOCATIONS WHERE EXPOSED TO THE ELEMENTS OR SUBJECT TO PHYSICAL DAMAGE. METAL-CLAD CABLE (TYPE MC) WILL BE ACCEPTABLE FOR SINGLE CIRCUIT BRANCH CIRCUITING, FLEXIBLE WHIPS FROM JUNCTION BOXES TO LIGHTING FIXTURES AND WITHIN CASEWORK. TYPE MC CABLE MAY NOT BE USED FOR HOMERUNS. ENT IS NOT ALLOWED. CONNECT RECESSED AND SUSPENDED LIGHTING FIXTURES, MOTORIZED AND VIBRATING EQUIPMENT WITH STEEL FLEX. ALL CONDUIT SHALL HAVE PULL CORD IF OTHERWISE EMPTY.
16.19	WIRING: WIRE SHALL BE COPPER UNLESS OTHERWISE INDICATED. MINIMUM WIRE SIZE SHALL BE #12 AWG.
16.20	FUSES: FUSES SHALL BE SIZED PER ACTUAL NAMEPLATE OF EQUIPMENT SERVED. FUSES SHALL BE DUAL-ELEMENT, CURRENT-LIMITING, AND SHALL BE INTERCHANGEABLE BETWEEN FRAME SIZES WITH STANDARD FACTORY FUSE REDUCERS. FUSES SHALL BE AS FOLLOWS UNLESS OTHERWISE INDICATED: a. CIRCUITS 601 TO 6000 AMPERES SHALL BE PROTECTED BY CURRENT LIMITING BUSSMANN LOW-PEAK TIME-DELAY FUSES KRP-C – UL CLASS L b. CIRCUITS 0 TO 600 AMPERES SHALL BE PROTECTED BY CURRENT LIMITING BUSSMANN LOW-PEAK DUAL-ELEMENT FUSES LPN-RK (250 VOLTS) OR LPS-RK (600 VOLTS) – UL CLASS RK1 c. ALL INDIVIDUAL MOTOR CIRCUITS RATED 480 AMPERES OR LESS SHALL BE PROTECTED BY BUSSMANN LOW-PEAK DUAL-ELEMENT FUSES LPN-RK (250 VOLTS) OR LPS-RK (600 VOLTS) – UL CLASS RK1 OR L d. CIRCUIT BREAKER PANELS SHALL BE PROTECTED BY BUSSMANN LOW-PEAK DUAL-ELEMENT FUSES LPN-RK (250 VOLTS), LPS-RK (600 VOLTS) OR BUSSMANN LOW-PEAK KRP-C TIME-DELAY FUSES – UL CLASS RK1 OR L e. ALL DUAL-ELEMENT FUSES SHALL HAVE SEPARATE OVERLOAD AND SHORT-CIRCUIT ELEMENTS. f. PROVIDE SPARE FUSE CABINET AFTER THE COMPLETION OF THE PROJECT WITH ONE SET OF SPARE FUSES FOR EVERY SIZE USED.
16.21	TEMPORARY CONSTRUCTION POWER: PROVIDE TEMPORARY ELECTRICAL POWER AND LIGHTING FOR ALL TRADES THAT REQUIRE SERVICE DURING THE COURSE OF THIS PROJECT. PROVIDE TEMPORARY SERVICE AND DISTRIBUTION AS REQUIRED. COMPLY WITH THE NEC AND OSHA REQUIREMENTS. (ENERGY COSTS BY OTHERS).
16.22	SUBMITTALS: BEFORE ORDERING ANY EQUIPMENT, CONTRACTOR SHALL SUBMIT SIX COPIES OF FACTORY SHOP DRAWINGS FOR ALL LIGHTING FIXTURES, SWITCHGEAR, PANELS, MOTOR CONTROLLERS, WIRING DEVICES, ETC. PROPOSED FOR THIS PROJECT.
16.23	SUBSTITUTIONS: PROPOSED SUBSTITUTIONS SHALL BE EQUAL OR SUPERIOR TO SPECIFIED ITEMS IN ALL RESPECTS. DETERMINATION OF EQUALITY RESTS SOLELY WITH ENGINEER. SUBSTITUTIONS MUST BE SUBMITTED A MINIMUM OF 10 WORKING DAYS PRIOR TO BID FOR CONSIDERATION. PROPOSED SUBSTITUTIONS PROVIDED LATER WILL NOT BE REVIEWED OR ALLOWED. BID SUBSTITUTED MATERIAL WILL ONLY BE ALLOWED IF ACCEPTED IN WRITING BY ENGINEER.
16.25	IDENTIFICATION: PROVIDE ENGRAVED NAMEPLATES FOR ALL SWITCHBOARDS, PANELS, TRANSFORMERS, DISCONNECTS, MOTOR STARTERS, CONTACTORS, TIME SWITCHES AND CABINETS. NAMEPLATES SHALL INCLUDE THE FOLLOWING INFORMATION AS APPLICABLE: DESIGNATION (i.e. PANEL A) FUNCTION (i.e. AIR HANDLER AH-1) VOLTAGE, PHASE, WIRE (i.e. 480 VOLT, 3ø, 4W.) FEEDER SIZE (i.e. 4-#4/0 THWN CU IN 2" C.) SOURCE (i.e. SWITCHBOARD MSB) NAMEPLATES SHALL BE WHITE LETTERS ON BLACK FOR NORMAL EQUIPMENT AND WHITE LETTERS ON RED FOR EMERGENCY EQUIPMENT.
16.24	GUARANTEE: THE COMPLETE ELECTRICAL SYSTEM, AND ALL PORTIONS THEREOF, SHALL BE GUARANTEED TO BE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE. PROMPTLY REMEDY SUCH DEFECTS AND ANY SUBSEQUENT DAMAGE CAUSED BY THE DEFECTS OR REPAIR THEREOF AT NO EXPENSE TO THE OWNER. LAMPS ARE EXEMPT FROM THIS GUARANTEE, BUT SHALL BE NEW AT TIME OF FINAL ACCEPTANCE.
16.26	SUSPENDED CEILING SYSTEMS: ALL LAY-IN FIXTURES SHALL BE INDEPENDENTLY SUPPORTED BY FOUR #12 SLACK WIRES ATTACHED TO TWO OPPOSITE CORNERS OF THE FIXTURE PER UBC & NEC REQUIREMENTS. THESE WIRES SHALL BE SECURED TO THE STRUCTURAL FRAMING SUCH THAT FAILURE OF THE SUSPENDED CEILING SHALL NOT ALLOW THE FIXTURE TO DROP.
16.27	COORDINATION: THE CIVIL, ARCHITECTURAL, MECHANICAL, KITCHEN AND INTERIOR DRAWINGS CONTAIN DETAIL DESCRIPTIONS, CIRCUITING AND CONNECTION REQUIREMENTS WHICH ARE PART OF DIVISION 16 RESPONSIBILITIES. ELECTRICAL CONTRACTOR SHOULD NOT SUBMIT BIDS ON THIS PROJECT BEFORE REVIEWING ALL PROJECT DRAWINGS, SPECIFICATIONS AND ADDENDA.
16.28	FIRE ALARM: EXISTING FIRE ALARM SYSTEM TO REMAIN: MAINTAIN IN CONSTANT OPERATION DURING THIS PROJECT. NEW COMPONENTS AND CIRCUITING SHALL BE FACTORY-CERTIFIED AS BEING PROJECT-SPECIFIC COMPATIBLE WITH EXISTING SYSTEM. ALL CONNECTIONS TO EXISTING SYSTEM SHALL BE PERFORMED BY FACTORY-CERTIFIED TECHNICIAN AND SHALL BE ACCEPTED BY OWNER'S SYSTEM- MONITORING AGENCY. PLANS DO NOT INDICATE ALL DEVICES, CONNECTIONS OR CIRCUITING REQUIRED FOR A COMPLETE SYSTEM. SUBMIT PROPOSED DESIGN TO THE FIRE MARSHAL AND RECEIVE APPROVAL PRIOR TO ROUGH-IN.
16.29	ONGOING OPERATION: CONDUCT WORK TO MINIMIZE DISRUPTION OF OWNER'S ONGOING OPERATIONS. PROVIDE BARRICADES, NOISE ABATEMENT AND DUST CONTAINMENT MEASURES TO ENSURE THE SAFETY AND COMFORT OF PATRONS, STAFF AND WORKERS. INTERRUPTIONS OF EXISTING POWER, COMMUNICATIONS OR FIRE ALARM SYSTEMS SHALL BE PERFORMED ONLY AT SUCH TIMES AS DIRECTED BY RESIDENT ENGINEER. OUTAGES SHALL BE MOMENTARY IN NATURE. EACH SUCH OUTAGE (OR OPERATION WHICH MAY POSE RISK OF AN ACCIDENTAL OUTAGE) SHALL BE SCHEDULED 48 HOURS IN ADVANCE.

DRAWING SCHEDULE

SHEET	DESCRIPTION	PERMIT ISSUANCE DATE: 9/25/14	BID ISSUANCE DATE: 11/3/14	XX DATE:	XX DATE:
E0.1	SYMBOL LIST, SPECIFICATIONS AND DRAWING SCHEDULE	●	●		
E0.2	LIGHTING FIXTURE SCHEDULE	●	●		
E0.3	PANEL SCHEDULES	●	●		
E0.4	EXISTING SINGLE LINE DIAGRAM	●	●		
E0.5	LIGHTING CONTROLS WIRING DIAGRAMS AND SCHEDULES	●	●		
E0.6	PROJECT SHEET NOTES AND GENERAL NOTES	●	●		
E0.7	TITLE 24 CALCULATIONS	●	●		
E0.7A	TITLE 24 CALCULATIONS	●	●		
E0.7B	TITLE 24 CALCULATIONS	●	●		
E1.1	DEMOLITION SITE PLAN	●	●		
E1.2	ELECTRICAL SITE PLAN	●	●		
E2.1	ELECTRICAL DEMOLITION PLAN	●	●		
E2.2	LIGHTING DEMOLITION PLAN	●	●		
E2.3	ROOF ELECTRICAL DEMOLITION PLAN	●	●		
E3.1	POWER PLAN	●	●		
E3.2	SIGNAL PLAN	●	●		
E3.3	ENLARGED ELECTRICAL PLANS	●	●		
E3.4	ELECTRICAL ROOF PLAN	●	●		
E4.1	SALES FLOOR LIGHTING PLAN	●	●		
E4.2	GARDEN CENTER LIGHTING PLAN	●	●		
E4.3	GARDEN CENTER PHOTOMETRIC PLAN	●	●		
E5.1	ENLARGED DETAILS	●	●		
E5.2	ENLARGED EAS DETAILS	●	●		
	TOTAL SHEETS THIS ISSUE:	23	23		

MASTER SYMBOL LIST

SIGNAL OUTLETS

▼	TELEPHONE: 4S BOX WITH SINGLE GANG MUD RING UON, +18" AFF UON
▼	TELEPHONE: 4S BOX WITH SINGLE GANG MUD RING UON, WALL MOUNT +54" AFF UON
▽	DATA: 4S BOX WITH SINGLE GANG MUD RING UON, +18" AFF UON
▼	VOICE/DATA: 4S BOX WITH SINGLE GANG MUD RING UON, +18" AFF UON
TV	TELEVISION: 4S BOX WITH SINGLE GANG MUD RING UON, +18" AFF UON
C	CAMERA: 4S BOX WITH SINGLE GANG MUD RING UON, CEILING MOUNTED UON
Ⓜ	MICROPHONE: 4S BOX WITH SINGLE GANG MUD RING UON, +18" AFF UON
Ⓥ	VOLUME CONTROL: 4S BOX WITH SINGLE GANG MUD RING UON, +48" TO TOP UON
Ⓢ	SPEAKER: 8" COAXIAL WITH BACK BOX AND GRILLE, CEILING MOUNTED UON
——⊐	3/4"C (UON) STUB INTO ACCESSIBLE CEILING SPACE

SWITCHES

S	SINGLE POLE: 20A, 120/277V, +48" TO TOP UON
S_2	TWO POLE: 20A, 120/277V, +48" TO TOP UON
S_3	THREE WAY: 20A, 120/277V, +48" TO TOP UON
S_4	FOUR WAY: 20A, 120/277V, +48" TO TOP UON
S_X	X INDICATES EMERGENCY CIRCUIT
S_P	P INDICATES PILOT LIGHT (LIGHTED WHEN ON)
S_L	L INDICATES PILOT LOCATOR (LIGHTED WHEN OFF)
S_K	K INDICATES KEY OPERATED SWITCH
S_M	MANUAL MOTOR STARTER: 20A, 120/277V, POLES AND HEATERS AS REQUIRED
S_{MC}	MOMENTARY CONTACT: 20A, 120/277V, SPDT CENTER NORMALLY OFF UON, +48" TO TOP UON
D	DIMMER: 600 WATT UON, ELECTRONIC SLIDER, WITH ON/OFF TOGGLE, +48" TO TOP UON (PLANS SHALL INDICATE TYPE: FLUOR, INCAND OR LOW-VOLTAGE)
◆	MOTION/OCCUPANCY SENSOR SWITCH WITH OFF-AUTO SELECTOR – WALL MOUNTED AT +48" TO TOP UON
OS = 360 OS ▶ = 180	ULTRASONIC MOTION/OCCUPANCY SENSOR SWITCH CEILING MOUNTED ARROWS INDICATE DIRECTION AND COVERAGE PROVIDE WITH POWER PACK PER MANUFACTURERS REQUIREMENTS
PE	PHOTO ELECTRIC SWITCH: 1600VA UON

METHODS

▨, S_X ▭, ○=,	SHADING INDICATES: FIXTURE, OUTLET, EQUIPMENT, ETC. ON EMERGENCY 'X' OR NIGHT LIGHT 'NL' CIRCUIT
SS	DEVICE MOUNTED IN MULTIPLE UNDER COMMON COVER MAXIMUM HEIGHT ON WALL SHALL BE +48" TO TOP UON
▼ ▽	DEVICES MOUNTED IN OR ABOVE COUNTER/BACKSPLASH: MAXIMUM HEIGHT ON WALLS SHALL BE +48" TO TOP UON
▼ J	FLUSH FLOOR MOUNTED WIRING DEVICES
▼J	FLUSH FLOOR MOUNTED WIRING DEVICES IN SINGLE MULTI-COMPARTMENT BOX
⊕ ⊙	RECEPTACLE MOUNTED IN CEILING OR CASEWORK
F ├○┤	FINE DASHING INDICATES EXISTING EQUIPMENT AND DEVICES TO BE REMOVED

DESIGNATIONS

F1	LIGHT FIXTURE: F1 = TYPE (SEE FIXTURE SCHEDULE)
2	SHEET NOTE
△1	REVISION DELTA: NUMBER REPRESENTS REVISION
AC 1	MECHANICAL AND PLUMBING EQUIPMENT
Ⓐ 5	MISCELLANEOUS: THESE AND OTHER SYMBOLS AS INDICATED IN TABLES AND SCHEDULES ON THE PLANS.

RECEPTACLES

=⊖ =◇	DUPLEX: 20A, 125V, NEMA 5-20, +18" AFF
=⊕ =◇	DOUBLE DUPLEX: 20A, 125V, NEMA 5-20, +18" AFF
=⊖ =◇	HALF SWITCHED DUPLEX: 20A, 125V, NEMA 5-20, +18" AFF (TOP HALF SWITCHED)
=◐ =◆	DUPLEX GFCI: 20A, 125V, GFCI, NEMA 5-20 GFR, +18" AFF
=⊙ =◈	DUPLEX I.G.: 20A, 125V, ISO. GND., NEMA 5-20 IG +18" AFF (WHITE WITH ORANGE TRIANGLE, UON)
=⊙ =◈	DOUBLE DUPLEX I.G.: 20A, 125V, ISO. GND., NEMA 5-20 IG +18" AFF (WHITE WITH ORANGE TRIANGLE, UON)
≡⊖ –⊖	SPECIAL RECEPTACLE – AS INDICATED ON PLANS, +18" AFF

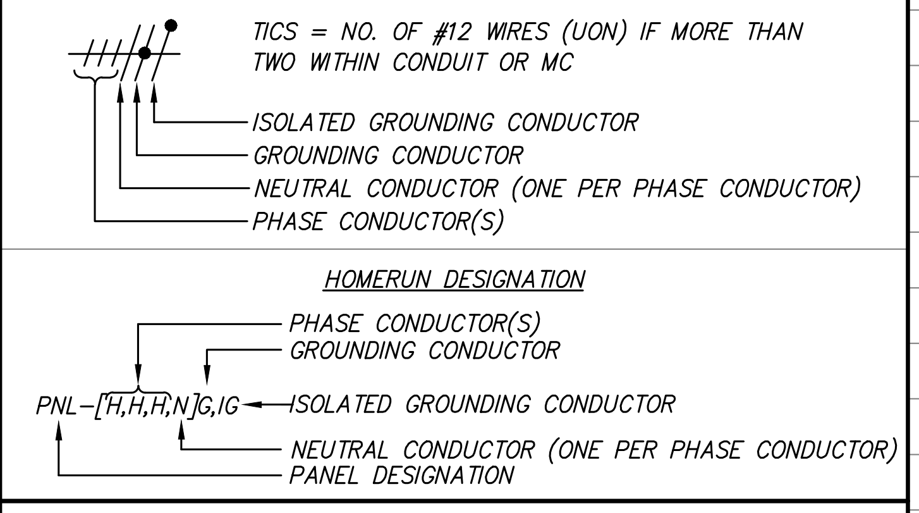
NOTE: DIAMOND SYMBOLS INDICATES DEDICATED CIRCUIT.

EQUIPMENT

▨	SWITCHBOARD
▬	PANELBOARD: SURFACE MOUNTED
▬	PANELBOARD: FLUSH MOUNTED
T	TRANSFORMER
⧄	RELAY (120V COIL , STEP DN XFMR IF REQUIRED, UON)
⧅	CONTACTOR (120V COIL, STEP DN XFMR IF REQUIRED, UON)
⊠	COMBINATION MAGNETIC STARTER/FUSED DISCONNECT
☐	NON-FUSIBLE DISCONNECT SWITCH
F	FUSIBLE DISCONNECT SWITCH
▩	PULLBOX: SIZE AS REQUIRED BY NEC
Ⓙ	JUNCTION BOX: SIZE AS REQUIRED BY NEC
— — —	SURFACE RACEWAY WITH OR WITHOUT DEVICES
TP	TELEPOWER POLE

CIRCUITING

———	CONDUIT IN WALL OR ABOVE CEILING
— — —	CONDUIT IN FLOOR OR BELOW GRADE
┼┼┼┼┼┼	METAL CLAD CABLE (MC)
—OH—	OVERHEAD SERVICE
— P —	PRIMARY
— S —	SECONDARY
— T —	TELEPHONE
—TV—	TELEVISION
—·—·—	LOW VOLTAGE AND/OR CONTROL CIRCUITNG
—**—	EMERGENCY CIRCUIT
——⊐	STUB OUT: MARK AND CAP (SITE)
——⊃	CIRCUITING UP OR DOWN


TICS = NO. OF #12 WIRES (UON) IF MORE THAN TWO WITHIN CONDUIT OR MC
ISOLATED GROUNDING CONDUCTOR
GROUNDING CONDUCTOR
NEUTRAL CONDUCTOR (ONE PER PHASE CONDUCTOR)
PHASE CONDUCTOR(S)
HOMERUN DESIGNATION
PHASE CONDUCTOR(S)
GROUNDING CONDUCTOR
PNL-[H,H,H,N]G,IG
ISOLATED GROUNDING CONDUCTOR
NEUTRAL CONDUCTOR (ONE PER PHASE CONDUCTOR)
PANEL DESIGNATION

MISCELLANEOUS

Ⓣ	THERMOSTAT: AT +54" TO TOP UON (OR PER MECH PLANS)
ⓕ	EXHAUST FAN: FRACTIONAL HORSEPOWER
①	MOTOR: NUMBER = HORSEPOWER
SIGN	SIGNAGE CONNECTION
◁	SHUNT TRIP STATION: +7'-6" AFF, 12" RED TRIANGLE, UON
⊙	CONTROL STATION: AT +48" TO TOP UON
a b	DUAL LEVEL LIGHTING CONTROL SWITCH 'a' = CENTER (1) LAMP SWITCH 'b' = OUTER (2) LAMPS

ABBREVIATIONS

℄	CENTERLINE
AFF	ABOVE FINISHED FLOOR
AIC	AMPERES INTERRUPTING CAPACITY
AFC	ABOVE FINISH CEILING
BMS	BUILDING MANAGEMENT SYSTEM
C	CONDUIT
CB	CIRCUIT BREAKER
CLG	CEILING
CIR	CIRCUIT
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
(E)	EXISTING TO REMAIN
ELEV	ELEVATOR
EMT	ELECTRICAL METALLIC TUBING
EPO	EMERGENCY POWER OFF SYSTEM
FBO	FURNISHED BY OTHERS
FLUOR	FLUORESCENT
FU	FUSE: DUAL-ELEMENT, TIME DELAY
GFI/GFCI	GROUND FAULT INTERRUPTER
GND	GROUND
HOA	HAND-OFF-AUTOMATIC
HID	HIGH INTENSITY DISCHARGE
IG	ISOLATED GROUND
INCAND	INCANDESCENT
K	kcmil (300K = 300 kcmil)
LTG	LIGHTING
LV	LOW VOLTAGE
MCP	MOTOR CIRCUIT PROTECTOR
MC	MULTI-CONDUCTOR CABLE
(N)	NEW
NC	NORMALLY CLOSED
NEUT	NEUTRAL
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
PNL	PANEL
PVC	POLYVINYL CHLORIDE CONDUIT
(R)	EXISTING TO BE RELOCATED
RAC	RIGID ALUMINUM CONDUIT
RSC	RIGID STEEL CONDUIT
SO	SEAL OFF
SPDT	SINGLE POLE DOUBLE THROW
SPEN	SIZE PER EQUIPMENT NAMEPLATE
SPST	SINGLE POLE SINGLE THROW
TEL	TELECOM
TYP	TYPICAL
UNSW	UNSWITCHED
UON	UNLESS OTHERWISE NOTED
WP	WEATHERPROOF (NEMA 3R)
WT	WATERTIGHT
(X)	EXISTING TO BE REMOVED
XFMR	TRANSFORMER
XP	EXPLOSION PROOF
FPEN	FUSE PER EQUIPMENT NAMEPLATE

NOTE:
THIS IS A MASTER SYMBOL LIST, ALL SYMBOLS SHOWN MAY NOT BE USED WITHIN THIS SET OF PLANS

CITY OF GRANADA HILLS BULLETIN

ELECTRICAL EQUIPMENT SHALL BE LISTED BY A CITY OF GRANADA HILLS RECOGNIZED ELECTRICAL TESTING LABORATORY OR APPROVED BY THE DEPARTMENT.

ELECTRICAL SCOPE OF WORK

PROVIDE A COMPLETE ELECTRICAL DEMOLITION OF THE EXISTING ORCHARD SUPPLY HARDWARE SALES FLOOR AND GARDEN CENTER.

UTILIZE THE EXISTING ELECTRICAL SERVICE ENTRANCE AND DISTRIBUTION EQUIPMENT. PROVIDE NEW CIRCUIT BREAKERS AS NECESSARY.

PROVIDE NEW FEEDERS TO ALL OF THE EXISTING AND NEW ROOF TOP UNITS.

PROVIDE ALL NEW RECEPTACLES, DATA AND TELE/DATA DEVICES, LIGHTING FIXTURES, SWITCHES AND SENSORS FOR A COMPLETE AND FUNCTIONING SYSTEM PER ORCHARD SUPPLY HARDWARE CORPORATE REQUIREMENTS.

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BID DOCUMENTS
9/24/14

Orchard
est. 1931
SUPPLY HARDWARE
18060 CHATSWORTH STREET
GRANADA HILLS, CALIFORNIA

SYMBOL LIST AND SPECIFICATIONS

	DATE	REMARKS
1	09/25/2014	BUILDING DEPARTMENT SUBMITTAL
2	11/03/2014	BID SET

PM/ENG: RP/JS
DRAWN BY: RP
JOB NO.: SNR14-0037-00

SHEET
E0.1

11/03/2014 BID SET

LIGHTING FIXTURE SCHEDULE

LIGHTING FIXTURE CATALOG NUMBERS ARE SERIES TYPE ONLY. PROVIDE TRIMS, BALLASTS, MOUNTING EQUIPMENT, FITTINGS AND LAMPS AS REQUIRED BY THE SPECIFICATIONS AND PROJECT CONDITIONS FOR A COMPLETE INSTALLATION. THIS IS NOT A STANDALONE SCHEDULE AND FIXTURES MUST INCORPORATE ALL WORK INDICATED OR IMPLIED THROUGHOUT THE DRAWINGS AND SPECIFICATIONS.

TYPE	SYMBOL	DESCRIPTION AND MANUFACTURER
A1	♀	EXTERIOR RATED RLM FIXTURE. **MOUNTING HEIGHT:** PER ARCH DRAWINGS **LAMP:** (1) 40W A21 **VOLTAGE:** 120V **MANUFACTURER:** HI-LITE: H15516-118/HL-A-118/CGU-CLR-118 **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
F1	⧅	2x4 3-LAMP FLUORESCENT TROFFER WITH A .125 THICK ACRYLIC LENS. **MOUNTING HEIGHT:** RECESSED **LAMP:** (3) 32W T8 – 4100K **VOLTAGE:** 277V **MANUFACTURER:** LITHONIA: 2GT8 332 A125 MVOLT GEB10PS **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
F1X	⧅	2x4 3-LAMP FLUORESCENT TROFFER WITH A .125 THICK ACRYLIC LENS. PROVIDE 90 MINUTE BATTERY PACK. **MOUNTING HEIGHT:** RECESSED **LAMP:** (3) 32W T8 – 4100K **VOLTAGE:** 277V **MANUFACTURER:** LITHONIA: 2GT8 332 A125 MVOLT GEB10PS EL14 **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
F2	▮	LED 18,000 LUMEN, DIMMABLE HI-BAY FIXTURE WITH ACRYLIC LENS. **MOUNTING HEIGHT:** +14'-0" AFF **LAMP:** 18,000 LUMEN LED **VOLTAGE:** 277V **MANUFACTURER:** LITHONIA: IBH 18L MVOLT **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
F3	¤	DECORATIVE RLM TYPE FIXTURE. MOUNTED FROM 2" HEAVY UNISTRUT. **MOUNTING HEIGHT:** +/-5'-0" ABOVE COUNTERTOP **LAMP:** (1) 13W CFL – 4100K **VOLTAGE:** 120V **MANUFACTURER:** HI-LITE: H1414 96 FR CB8 96 FX 96 13/CFL BCM M **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
F4	▯	EXTERIOR RATED TANDEM FLUORESCENT PENDANT MOUNTED FIXTURE WITH CLEAR ACRYLIC LENS **MOUNTING HEIGHT:** MOUNTED ON UNISTRUT – PER OSH DIRECTION **LAMP:** (4) 32W T8 – 4100K **VOLTAGE:** 277V **MANUFACTURER:** LITHONIA: TDMW 232 MVOLT GEB10PS **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
F4X	▯	EXTERIOR RATED TANDEM FLUORESCENT PENDANT MOUNTED FIXTURE WITH CLEAR ACRYLIC LENS PROVIDE 90 MINUTE BATTERY PACK ON (1) LAMP **MOUNTING HEIGHT:** MOUNTED ON UNISTRUT – PER OSH DIRECTION **LAMP:** (4) 32W T8 – 4100K **VOLTAGE:** 277V **MANUFACTURER:** LITHONIA: TDMW 232 MVOLT GEB10PS EL14DW DL **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
F6	⌶	4'-0", TANDEM 2-LAMP FLUORESCENT STRIP WITH SYMMETRIC REFLECTOR AND JACK CHAIN HANG. KIT. **MOUNTING HEIGHT:** RECESSED **LAMP:** (2) 32W T8 PER 4' SECTION – 4100K **VOLTAGE:** 277V **MANUFACTURER:** LITHONIA: TZ 232 MVOLT GEB10IS Z8SMR48 **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
F6X	⌶	4'-0", TANDEM 2-LAMP FLUORESCENT STRIP WITH SYMMETRIC REFLECTOR AND JACK CHAIN HANG KIT. PROVIDE WITH 90 MINUTE BATTERY PACK. **MOUNTING HEIGHT:** RECESSED **LAMP:** (2) 32W T8 PER 4' SECTION – 4100K **VOLTAGE:** 277V **MANUFACTURER:** LITHONIA: TZ 232 MVOLT GEB10IS EL65 Z8SMR48 **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
F7	⌶	4'-0" 2-LAMP FLUORESCENT STRIP WITH SYMMETRIC REFLECTOR AND JACK CHAIN HANG KIT **MOUNTING HEIGHT:** RECESSED **LAMP:** (2) 32W T8 – 4100K **VOLTAGE:** 277V **MANUFACTURER:** LITHONIA: Z 232 MVOLT GEB10IS Z8SM48 **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
F7X	⌶	4'-0" 2-LAMP FLUORESCENT STRIP WITH SYMMETRIC REFLECTOR AND JACK CHAIN HANG KIT PROVIDE 90 MINUTE BATTERY PACK. **MOUNTING HEIGHT:** RECESSED **LAMP:** (2) 32W T8 – 4100K **VOLTAGE:** 277V **MANUFACTURER:** LITHONIA: Z 232 MVOLT GEB10IS Z8SM48 **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
F8X	▯	1X4 2-LAMP FLUORESCENT SURFACE MOUNTED WRAPAROUND WITH 90 MINUTE BATTERY PACK. **MOUNTING HEIGHT:** RECESSED **LAMP:** (2) 32W T8 – 4100K **VOLTAGE:** 277V **MANUFACTURER:** LITHONIA: AW 232 MVOLT GEB10PS EL14 **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
F9	⧅	1X4 2-LAMP FLANGED FLUORESCENT FIXTURE WITH A12 ACRYLIC LENS. **MOUNTING HEIGHT:** RECESSED **LAMP:** (2) 32W T8 – 4100K **VOLTAGE:** 277V **MANUFACTURER:** LITHONIA: GT8 F 232 A12 MVOLT GEB10IS **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
F9X	⧅	1X4 2-LAMP FLANGED FLUORESCENT FIXTURE WITH A12 ACRYLIC LENS. PROVIDE 90 MINUTE BATTERY PACK. **MOUNTING HEIGHT:** PER ARCH DRAWINGS **LAMP:** (2) 32W T8 – 4100K **VOLTAGE:** 277V **MANUFACTURER:** LITHONIA: GT8 F 232 A12 MVOLT GEB10IS EL14 **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
F10	⧅	2X4 2-LAMP FLUORESCENT T-BAR LAY-IN FIXTURE WITH A12 ACRYLIC LENS. **MOUNTING HEIGHT:** RECESSED **LAMP:** (2) 32W T8 – 4100K **VOLTAGE:** 277V **MANUFACTURER:** LITHONIA: 2GT8 232 A12 MVOLT GEB10PS **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
F10X	⧅	2X4 2-LAMP FLUORESCENT T-BAR LAY-IN FIXTURE WITH A12 ACRYLIC LENS. PROVIDE 90 MINUTE BATTERY PACK. **MOUNTING HEIGHT:** PER ARCH DRAWINGS **LAMP:** (2) 32W T8 – 4100K **VOLTAGE:** 277V **MANUFACTURER:** LITHONIA: 2GT8 232 A12 MVOLT GEB10PS EL14 **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
F11	▯	EXTERIOR RATED FLUORESCENT SURFACE MOUNTED FIXTURE WITH CLEAR ACRYLIC LENS **MOUNTING HEIGHT:** MOUNTED PER OSH DIRECTION **LAMP:** (2) 32W T8 – 4100K **VOLTAGE:** 277V **MANUFACTURER:** LITHONIA: DMW 232 MVOLT GEB10PS **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
F11X	▯	EXTERIOR RATED FLUORESCENT SURFACE MOUNTED FIXTURE WITH CLEAR ACRYLIC LENS. PROVIDE 90 MINUTE BATTERY PACK ON (1) LAMP **MOUNTING HEIGHT:** MOUNTED PER OSH DIRECTION **LAMP:** (2) 32W T8 – 4100K **VOLTAGE:** 277V **MANUFACTURER:** LITHONIA: DMW 232 MVOLT GEB10PS EL14DW DL **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
H1	⏚	DECORATIVE EXTERIOR RATED WALL SCONCE. COLOR BY ARCHITECT. **MOUNTING HEIGHT:** PER ARCH DRAWINGS **LAMP:** LEDS **VOLTAGE:** 120V **MANUFACTURER:** DALS: 1050 LED 3000 **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
H2	♀	DECORATIVE EXTERIOR RATED WALL SCONCE. COLOR BY ARCHITECT. **MOUNTING HEIGHT:** PER ARCH DRAWINGS **LAMP:** 50W PSMH **VOLTAGE:** 120V **MANUFACTURER:** DALS: 2007 W003 50M SL PS **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
L1	⊥	EXTERIOR RATED LED FLOOD LIGHT WITH WIDE FLOOD OPTIC AND WALL MOUNTED TENON SLIP FITTER BRACKET. **MOUNTING HEIGHT:** +/-12'-0" AFF **LAMP:** 5000 LUMEN LED **VOLTAGE:** 277V **MANUFACTURER:** LITHONIA: DSXF2 LED4 WFL 40K MVOLT DSXF2/2TS AFWMA **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
L2	⌘	EXTERIOR RATED LED FLOOD LIGHT WITH POLE MOUNT BRACKET MOUNTED ON A FLUSH MOUNTED 4" SQUARE STEEL POLE. SEE STRUCTURAL PLANS FOR POLE BASE DETAIL. **MOUNTING HEIGHT:** +/-12'-0" AFF **LAMP:** 3000 LUMEN LED **VOLTAGE:** 277V **MANUFACTURER:** LITHONIA: DSXF1 LED2 40K MVOLT DSXF1/2TS AFWMA **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
X1	⊗	SINGLE FACE EXIT SIGNAGE WITH GREEN LED LETTERING. PROVIDE 90 MINUTE BATTERY PACK. **MOUNTING HEIGHT:** ABOVE DOOR **LAMP:** INCLUDED **VOLTAGE:** 277V **MANUFACTURER:** LITHONIA: LHQM LED G HO RO **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
X2	⏚	EXTERIOR RATED REMOTE 1-LAMP LED EMERGENCY LIGHTING UNIT. THIS LAMP GETS ITS 90 MINUTE BACK-UP POWER FROM THE INTERIOR MOUNTED EXIT SIGN. **MOUNTING HEIGHT:** ABOVE/ADJACENT TO DOOR **LAMP:** INCLUDED **VOLTAGE:** 277V **MANUFACTURER:** LITHONIA: ELA LED WP M12 **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
X3	⊔	EMERGENCY LIGHTING UNIT WITH WHITE HOUSING, ADJUSTABLE LAMPS AND 90 MINUTE BATTERY PACK, MOUNTED ON RIGID STEM. **MOUNTING HEIGHT:** +/-14'-0" AFF **LAMP:** INCLUDED **VOLTAGE:** 277V **MANUFACTURER:** LITHONIA: ELM2 SERIES **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
X4	⊗	COMBINATION EXIT/EMERGENCY LIGHT WITH GREEN LETTERS AND WHITE HOUSING WITH DUAL LAMPS. PROVIDE 90 MINUTE BATTERY PACK. **MOUNTING HEIGHT:** ABOVE DOOR **LAMP:** INCLUDED **VOLTAGE:** 277V **MANUFACTURER:** LITHONIA: LHQM SERIES **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**
X5	▬	EXTERIOR RATED, EMERGENCY LIGHTING UNIT WITH WHITE HOUSING, ADJUSTABLE LAMPS AND 90 MINUTE BATTERY PACK. **MOUNTING HEIGHT:** +/-14'-0" AFF **LAMP:** INCLUDED **VOLTAGE:** 277V **MANUFACTURER:** LITHONIA: ELM2 SERIES **SUBSTITUTIONS:** ○ **OR EQUAL** ○ **SUBJECT TO REVIEW** ● **NO EQUAL**

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BID DOCUMENTS
9/24/14

Orchard est. 1931 SUPPLY HARDWARE
18060 CHATSWORTH STREET
GRANADA HILLS, CALIFORNIA

LIGHTING FIXTURE SCHEDULE

	DATE	REMARKS
1	09/25/2014	BUILDING DEPARTMENT SUBMITTAL
2	11/03/2014	BID SET

PM/ENG:	RP/JS
DRAWN BY:	RP
JOB NO.:	SNR14-0037-00

SHEET
E0.2

11/03/2014 BID SET

E = EQUIPMENT, K = KITCHEN, L = LIGHTING, H = HEAT, M = MOTOR, M1 = MOTOR (LARGEST), R = RECEPTS

LOCATION: **ELECTRICAL ROOM**

DF	DESCRIPTION	LOAD	BKR	CIR	A	B	C	CIR	BKR	LOAD	DESCRIPTION	DF
L	LIGHT CLOUD	1000	20/1	1	1360			2	20/1	360	CHECKSTAND 5 & 6	E
L	LIGHT CLOUD	1000	20/1	3		1360		4	20/1	360	CHECKSTAND 1 & 2	E
L	LIGHT CLOUD	1000	20/1	5			1360	6	20/1	360	CHECKSTAND 3 & 4	E
L	LIGHT CLOUD	1000	20/1	7	1360			8	20/1	360	NURSERY CHECKSTAND	E
L	LIGHT CLOUD	1000	20/1	9		1180		10	20/1	180	CUSTOMER SRVC STAND	E
L	LIGHT CLOUD	1000	20/1	11			1200	12	20/1	200	CUSTOMER SRVC SMS	E
L	LIGHT CLOUD	1000	20/1	13	1200			14	20/1	200	CUSTOMER SRVC SMS	E
L	LIGHT CLOUD	1000	20/1	15		1360		16	20/1	360	CORD REELS	E
L	LIGHT CLOUD	1000	20/1	17			1360	18	20/1	360	CORD REELS	E
L	LIGHT CLOUD	1000	20/1	19	1500			20	20/1	500	CART CHARGER	E
L	LIGHT CLOUD	1000	20/1	21		1360		22	20/1	360	CUT CENTER	E
L	LIGHT CLOUD	1000	20/1	23			1540	24	20/1	540	SHARPENING CENTER	E
L	WALL LIGHTING DISPLAY	1000	20/1	25	1180			26	20/1	180	SALES WORKSTATION	E
L	WALL LIGHTING DISPLAY	1000	20/1	27		1180		28	20/1	180	SALES WORKSTATION	E
L	WALL LIGHTING DISPLAY	1000	20/1	29			1180	30	20/1	180	CUT CENTER WORKST.	E
L	WALL LIGHTING DISPLAY	1000	20/1	31	1540			32	20/1	540	CORD REELS	E
L	WALL LIGHTING DISPLAY	1000	20/1	33		1540		34	20/1	540	CORD REELS	E
E	CORD REELS	360	20/1	35			900	36	20/1	540	CORD REELS	E
E	PROMO POWER	360	20/1	37	1060			38	20/1	700	EF-5	M
L	LANDSCAPE LIGHTING	600	20/1	39		1180		40	20/1	580	VALANCE LIGHTING	L
E	PROMO POWER	720	20/1	41			1300	42	20/1	580	VALANCE LIGHTING	L
					9200	9160	8840					

AMPS:	150	NEUTRAL BUS:	100%	CON. KVA:	27.2
VOLTAGE:	208	GROUND BUS:	STANDARD	CON. AMPS:	75.5
PHASE / WIRE:	3-PH , 4W	AIC RATING:	10,000	NET KVA:	31.9
MAIN:		NEMA RATING:	1	NET AMPS:	88.5
LUGS:	MLO	EXISTING PANEL		Notes:	
MOUNTING:	SURFACE	**LB**		NEW LOAD ADDED TO EXISTING PANEL	
BUS:	COPPER				
DOOR:	STANDARD				

E = EQUIPMENT, K = KITCHEN, L = LIGHTING, H = HEAT, M = MOTOR, M1 = MOTOR (LARGEST), R = RECEPTS

LOCATION: **ELECTRICAL ROOM**

DF	DESCRIPTION	LOAD	BKR	CIR	A	B	C	CIR	BKR	LOAD	DESCRIPTION	DF
E	(E) OFFICE RECEPT	540	20/1	1	2790			2	30	2250	WATER HEATER	E
E	(E) OFFICE RECEPT	540	20/1	3		2790		4	2	2250		E
E	(E) OFFICE RECEPT	540	20/1	5			1540	6	20/1	1000	(E) VENDING MACHINE	E
E	(E) OFFICE RECEPT	540	20/1	7	1540			8	20/1	1000	(E) VENDING MACHINE	E
E	(E) COMP. RM RECEPTS	540	20/1	9		540		10	20/1			
E	(E) CASH ROOM PLUGMOLD	540	20/1	11			540	12	20/1			
E	(E) CASH ROOM PLUGMOLD	540	20/1	13	1540			14	20/1	1000	(E) REFRIGERATOR	E
E	(E) OFFICE/CONF. RM. REC.	540	20/1	15		1540		16	20/1	1000	(E) MICROWAVE	E
E	(E) OFFICE/ANTE RECEPTS	360	20/1	17			720	18	20/1	360	BREAKROOM COUNTER	R
R	NURSERY GENERAL USE	540	20/1	19	1040			20	20/1	500	(E) DISPOSAL	E
E	(E) PICK-UP AREA RECEPTS	540	20/1	21		720		22	20/1	180	(E) DRINKING FOUNTAIN	E
E	PESTICIDE REFER	500	20/1	23			860	24	20/1	360	(E) BREAKRM/STORAGE	R
E	SODA COOLER	500	20/1	25	860			26	20/1	360	(E) BREAKRM/STORAGE	E
E	SODA COOLER	500	20/1	27		680		28	20/1	180	PARKING LOT RECEPTS	R
R	(E) ROOF MAINTENANCE	540	20/1	29			640	30	20/1	100	(E) IRRIGATION CONTROL	E
R	(E) ROOF MAINTENANCE	540	20/1	31	1540			32	20/1	1000	NURSERY RECEPT - GFCI *	E
M	EF-2	500	20/1	33		1500		34	20/1	1000	NURSERY RECEPT - GFCI *	E
M	EF-1	500	20/1	35			1500	36	20/1	1000	NURSERY RECEPT - GFCI *	E
E	MENS HAND DRYER	587	20/1	37	1587			38	20/1	1000	NURSERY RECEPT - GFCI *	E
E	WOMENS HAND DRYER	587	20/1	39		1587		40	20/1	1000	NURSERY RECEPT - GFCI *	E
			20/1	41			1000	42	20/1	1000	NURSERY RECEPT - GFCI *	E
					10897	9357	6800					

AMPS:	150	NEUTRAL BUS:	100%	CON. KVA:	27.1
VOLTAGE:	208	GROUND BUS:	STANDARD	CON. AMPS:	75.1
PHASE / WIRE:	3-PH , 4W	AIC RATING:	10,000	NET KVA:	27.1
MAIN:		NEMA RATING:	1	NET AMPS:	75.1
LUGS:	MLO	EXISTING PANEL		Notes:	
MOUNTING:	SURFACE	**LA**		NEW LOAD ADDED TO EXISTING PANEL.	
BUS:	COPPER			*** = PROVIDE GFCI CIRCUIT BREAKER**	
DOOR:	STANDARD				

E = EQUIPMENT, K = KITCHEN, L = LIGHTING, H = HEAT, M = MOTOR, M1 = MOTOR (LARGEST), R = RECEPTS

LOCATION: **ELECTRICAL ROOM**

DF	DESCRIPTION	LOAD	BKR	CIR	A	B	C	CIR	BKR	LOAD	DESCRIPTION	DF
L	(E) PICK-UP/RECEIVING LTS	1560	20/1	1	3384			2	20/1	1824	NURSERY LIGHTING	L
L	(E) PICK-UP/RECEIVING LTS	520	20/1	3		3561		4	20/1	3041	NURSERY LIGHTING	L
L	SALES FLOOR LIGHTING	1980	20/1	5			2085	6	20/1	105	CHECKSTAND LIGHTING	L
L	SALES FLOOR LIGHTING	1980	20/1	7	3960			8	20/1	1980	SALES FLOOR LIGHTING	L
			20/1	9		1980		10	20/1	1980	SALES FLOOR LIGHTING	L
			20/1	11			1980	12	20/1	1980	SALES FLOOR LIGHTING	L
L	(E) EXIT CORRIDOR LTS	900	20/1	13	2880			14	20/1	1980	SALES FLOOR LIGHTING	L
L	(E) RSTRMS/BREAKRM LTS	910	20/1	15		2890		16	20/1	1980	SALES FLOOR LIGHTING	L
			20/1	17			1980	18	20/1	1980	SALES FLOOR LIGHTING	L
L	EXTERIOR ENTRY LIGHTS	285	20/1	19	2265			20	20/1	1980	SALES FLOOR LIGHTING	L
L	EXTERIOR NURSERY LTS	120	20/1	21		985		22	20/1	865	(E) LUMBER AREA LIGHTS	L
			20/1	23			865	24	20/1	865	(E) LUMBER AREA LIGHTS	L
E		7226	60	25	8126			26	20/1	900	(E) EXT. BLDG. LIGHTS	L
E	(E) PANEL EM	7002	-	27		7902		28	20/1	900	(E) EXT. BLDG. LIGHTS	L
E		7289	3	29			7289	30	20/1			
			20/1	31	11940			32	100	11940		E
			20/1	33		10820		34	-	10820	(E) PANEL EH	E
E		100	20	35			8865	36	3	8765		E
E	(E) PHASE LOSS MONITOR	100	-	37	7600			38	225	7500		E
E		100	3	39		7880		40	-	7780	(E) PANEL LC	E
			20/1	41			7540	42	3	7540		E
					40155	36018	30604					

AMPS:	400	NEUTRAL BUS:	100%	CON. KVA:	106.8
VOLTAGE:	480	GROUND BUS:	STANDARD	CON. AMPS:	128.4
PHASE / WIRE:	3-PH , 4W	AIC RATING:	14,000	NET KVA:	114.4
MAIN:		NEMA RATING:	1	NET AMPS:	137.6
LUGS:	MLO	EXISTING PANEL		Notes:	
MOUNTING:	SURFACE	**HA**		NEW LOAD ADDED TO EXISTING PANEL	
BUS:	COPPER				
DOOR:	STANDARD				

E = EQUIPMENT, K = KITCHEN, L = LIGHTING, H = HEAT, M = MOTOR, M1 = MOTOR (LARGEST), R = RECEPTS

LOCATION: **ELECTRICAL ROOM**

DF	DESCRIPTION	LOAD	BKR	CIR	A	B	C	CIR	BKR	LOAD	DESCRIPTION	DF
E	CUSTOMER SVC. RECEPT	500	20/1	1	1040			2	20/1	540	OFFICE RECEPTS	E
E	CHECKSTANDS RECEPT	500	20/1	3		585		4	20/1	85	(E) CAMERA CASH ROOM	E
E	CHECKSTANDS RECEPT	500	20/1	5			750	6	20/1	250	(E) MUZAK SYSTEM	E
E	CHECKSTAND SCANNER	750	20/1	7	900			8	20/1	150	EXISTING CAMERAS	E
E	CUSTOMER SVC. SCANNER	500	20/1	9		650		10	20/1	150	EXISTING CAMERAS	E
E	CHECKSTANDS RECEPT	500	20/1	11			885	12	20/1	385	EXISTING EQUIPMENT	E
E	EXTERIOR RECEPTS	540	20/1	13	1040			14	20/1	500	NURSERY CHECKSTAND	E
E	KEY MACHINE	500	20/1	15		900		16	20/1	400	PIPE CUTTER	E
E	CUSTOMER SVC. SMS	250	20/1	17			750	18	20/1	500	CHECKSTAND SCANNER	E
E	CUSTOMER SVC. SMS	250	20/1	19	750			20	20/1	500	CHECKSTAND SCANNER	E
			20/1	21		50		22	20/1	50	EXISTING DOOR BELL	E
E	NEW LTG CONTROL PANEL	200	20/1	23			250	24	20/1	50	EXISTING DOOR BELL	E
			20/1	25	585			26	20/1	585	(E) BLDG. SECURITY LTS	E
E	5 GAL. SHAKER	750	20/1	27		1450		28	20/1	700	EF-3	E
E	EF-4	700	20/1	29			1200	30	20/1	500	1 GAL. SHAKER	E
E	EXTERIOR RECEPTS	180	20/1	31	680			32	20/1	500	1 GAL. SHAKER	E
			20/1	33		360		34	20/1	360	PAINT CENTER	E
			20/1	35			0	36	20/1			
E		5845	20/1	37	6345			38	20/1	500	ACCUTINTER	E
E	(E) PANEL E2	4975	20/1	39		5475		40	20/1	500	ACCUTINTER	E
E		3930	20/1	41			4430	42	20/1	500	NURSERY CHECK. SCAN	E
					11340	9470	8265					

AMPS:	225	NEUTRAL BUS:	100%	CON. KVA:	29.1
VOLTAGE:	208	GROUND BUS:	STANDARD	CON. AMPS:	80.7
PHASE / WIRE:	3-PH , 4W	AIC RATING:	10,000	NET KVA:	29.1
MAIN:	150A MCB	NEMA RATING:	1	NET AMPS:	80.7
LUGS:	MLO	EXISTING PANEL		Notes:	
MOUNTING:	SURFACE	**E1**		NEW LOAD ADDED TO EXISTING PANEL	
BUS:	COPPER				
DOOR:	STANDARD				

E = EQUIPMENT, K = KITCHEN, L = LIGHTING, H = HEAT, M = MOTOR, M1 = MOTOR (LARGEST), R = RECEPTS

LOCATION: **ELECTRICAL ROOM**

DF	DESCRIPTION	LOAD	BKR	CIR	A	B	C	CIR	BKR	LOAD	DESCRIPTION	DF
	SPARE		20/1	1	0			2	20/1		SPARE	
	SPARE		20/1	3		0		4	20/1		SPARE	
	SPARE		20/1	5			0	6	20/1		SPARE	
	SPARE		20/1	7	0			8	20/1		SPARE	
	SPARE		20/1	9		0		10	20/1		SPARE	
	SPARE		20/1	11			0	12	20/1		SPARE	
	SPARE		20/1	13	0			14	20/1		SPARE	
	SPARE		20/1	15		0		16	20/1		SPARE	
	SPARE		20/1	17			0	18	20/1		SPARE	
	SPARE		20/1	19	0			20	20/1		SPARE	
	SPARE		20/1	21		0		22	20/1		SPARE	
	SPARE		20/1	23			0	24	20/1		SPARE	
L	(E) CANOPY SECURITY	600	20/1	25	600			26	20/1		SPARE	
L	MAIN BUILDING SIGN	1200	20/1	27		1350		28	20/1	150	(E) INT. NURSERY SIGN	L
L	NURSERY BUILDING SIGN	250	20/1	29			250	30	20/1		SPARE	
	SPARE		20/1	31	0			32	20/1		SPARE	
	SPARE		20/1	33		0		34	20/1		SPARE	
	SPARE		20/1	35			0	36	20/1		SPARE	
	SPARE		20/1	37	11340			38	70	11340		E
	SPARE		20/1	39		9470		40	-	9470	(E) PANEL E1	E
L	(E) PICK-UP SIGNAGE	250	20/1	41			8515	42	3	8265		E
					11940	10820	8765					

AMPS:	100	NEUTRAL BUS:	100%	CON. KVA:	31.5
VOLTAGE:	480	GROUND BUS:	STANDARD	CON. AMPS:	37.9
PHASE / WIRE:	3-PH , 4W	AIC RATING:	14,000	NET KVA:	32.1
MAIN:	90A MCB	NEMA RATING:	1	NET AMPS:	38.7
LUGS:	MLO	EXISTING PANEL		Notes:	
MOUNTING:	SURFACE	**EH**		NEW LOAD ADDED TO EXISTING PANEL	
BUS:	COPPER				
DOOR:	STANDARD				

E = EQUIPMENT, K = KITCHEN, L = LIGHTING, H = HEAT, M = MOTOR, M1 = MOTOR (LARGEST), R = RECEPTS

LOCATION: **ELECTRICAL ROOM**

DF	DESCRIPTION	LOAD	BKR	CIR	A	B	C	CIR	BKR	LOAD	DESCRIPTION	DF
R	GENERAL USE	360	20/1	1	1080			2	20/1	720	PROMO POWER	E
R	GENERAL USE	360	20/1	3		1080		4	20/1	720	PROMO POWER	E
R	GENERAL USE	540	20/1	5			1080	6	20/1	540	PROMO POWER	E
R	GENERAL USE	720	20/1	7	1220			8	20/1	500	MULTI-TOOLS	E
E	PUBLIC VIEW MONITOR	400	20/1	9		1120		10	20/1	720	PROMO POWER	E
E	SODA COOLER	500	20/1	11			1220	12	20/1	720	PROMO POWER	E
E	SODA COOLER	500	20/1	13	680			14	20/1	180	PROMO POWER	E
E	SODA COOLER	500	20/1	15		1400		16	20/1	900	BATH VENTS	E
E	SODA COOLER	500	20/1	17			1400	18	20/1	900	BATH VENTS	E
			20/1	19	360			20	20/1	360	PROMO POWER	E
E	(E) EQUIPMENT	100	20/1	21		700		22	20/1	600	TASK LIGHTING	L
			20/1	23			360	24	20/1	360	PROMO POWER	E
E		1200	20	25	2100			26	20/1	900	SHOP & STRIP LIGHTS	L
E	(E) DOCK LEVELER	1200	-	27		1920		28	20/1	720	PROMO POWER	E
E		1200	3	29			1920	30	20/1	720	PROMO POWER	E
E		1200	20	31	1700			32	20/1	500	NEON SIGN	L
E	(E) DOCK LEVELER	1200	-	33		1200		34	20/1			
E		1200	3	35			1200	36	20/1			
E	PROMO POWER	360	20/1	37	360			38	20/1			
E	PROMO POWER	360	20/1	39		360		40	20/1			
E	PROMO POWER	360	20/1	41			360	42	20/1			
					7500	7780	7540					

AMPS:	600	NEUTRAL BUS:	100%	CON. KVA:	22.8
VOLTAGE:	208	GROUND BUS:	STANDARD	CON. AMPS:	63.3
PHASE / WIRE:	3-PH , 4W	AIC RATING:	22,000	NET KVA:	23.3
MAIN:	500A MCB	NEMA RATING:	1	NET AMPS:	64.7
LUGS:	MLO	EXISTING PANEL		Notes:	
MOUNTING:	SURFACE	**LC**		PANEL CONTAINS (2) 150/3 SUB-FEED CIRCUIT	
BUS:	COPPER			BREAKERS. NEW LOAD ADDED TO EXISTING	
DOOR:	STANDARD			PANEL.	

E = EQUIPMENT, K = KITCHEN, L = LIGHTING, H = HEAT, M = MOTOR, M1 = MOTOR (LARGEST), R = RECEPTS

LOCATION: **ELECTRICAL ROOM**

DF	DESCRIPTION	LOAD	BKR	CIR	A	B	C	CIR	BKR	LOAD	DESCRIPTION	DF
E	(E) FIRE ALARM PANEL	400	20/1	1	400			2	20/1		SPARE	
E	(E) FIRE BELL	150	20/1	3		150		4	20/1		SPARE	
E	(E) GENSET BATT. CHRGER	1500	20/1	5			1500	6	20/1		SPARE	
E	(E) FIRE SMOKE DAMPERS	400	20/1	7	400			8	15			
	SPARE		20/1	9		0		10	-		MAIN CIRCUIT BREAKER	
	SPARE		20/1	11			0	12	3			
				13	0			14				
				15		0		16				
				17			0	18				
				19	0			20				
				21		0		22				
				23			0	24				
				25	0			26				
				27		0		28				
				29			0	30				
				31	0			32				
				33		0		34				
				35			0	36				
				37	0			38				
				39		0		40				
				41			0	42				
					800	150	1500					

AMPS:	100	NEUTRAL BUS:	100%	CON. KVA:	2.5
VOLTAGE:	208	GROUND BUS:	STANDARD	CON. AMPS:	6.8
PHASE / WIRE:	3-PH , 4W	AIC RATING:	10,000	NET KVA:	2.5
MAIN:	15A MCB	NEMA RATING:	1	NET AMPS:	6.8
LUGS:	MLO	EXISTING PANEL		Notes:	
MOUNTING:	SURFACE	**EMA**		EXISTING LOAD IS TO REMAIN. NO NEW LOAD	
BUS:	COPPER			IS ADDED TO THIS PANEL.	
DOOR:	STANDARD				

E = EQUIPMENT, K = KITCHEN, L = LIGHTING, H = HEAT, M = MOTOR, M1 = MOTOR (LARGEST), R = RECEPTS

LOCATION: **ELECTRICAL ROOM**

DF	DESCRIPTION	LOAD	BKR	CIR	A	B	C	CIR	BKR	LOAD	DESCRIPTION	DF
L	SALES FLOOR LIGHTING	1782	20/1	1	1782			2	20/1		SPARE	
L	SALES FLOOR LIGHTING	1782	20/1	3		2782		4	20/1	1000	(E) SUPPORT AREA LIGHTS	L
L	SALES FLOOR LIGHTING	1782	20/1	5			2342	6	20/1	560	OFFICE AREA LIGHTING	L
L	SALES FLOOR LIGHTING	1782	20/1	7	1782			8	20/1		SPARE	
L	SALES FLOOR LIGHTING	1782	20/1	9		1782		10	20/1		SPARE	
L	SALES FLOOR LIGHTING	1782	20/1	11			1782	12	20/1		SPARE	
L	SALES FLOOR LIGHTING	1782	20/1	13	2322			14	20/1	540	(E) PICK-UP AREA LIGHTS	L
L	SALES FLOOR LIGHTING	1188	20/1	15		1728		16	20/1	540	(E) PICK-UP AREA LIGHTS	L
	SPARE		20/1	17			720	18	20/1	720	(E) PICK-UP MEZZ. LIGHTS	L
	SPARE		20/1	19	540			20	20/1	540	(E) WAREHOUSE NITE LTS	L
L	(E) LUMBER AREA LIGHTS	560	20/1	21		560		22	20/1		SPARE	
L	(E) LUMBER AREA LIGHTS	560	20/1	23			945	24	20/1	385	(E) BLDG. SECURITY LTS	L
	SPARE		20/1	25	800			26	20	800		E
	SPARE		20/1	27		150		28	-	150	(E) PANEL EMA	E
	SPARE		20/1	29			1500	30	3	1500		E
				31	0			32				
				33		0		34				
				35			0	36				
				37	0			38				
				39		0		40				
				41			0	42				
					7226	7002	7289					

AMPS:	100	NEUTRAL BUS:	100%	CON. KVA:	21.5
VOLTAGE:	480	GROUND BUS:	STANDARD	CON. AMPS:	25.9
PHASE / WIRE:	3-PH , 4W	AIC RATING:	14,000	NET KVA:	26.3
MAIN:	60A MCB	NEMA RATING:	1	NET AMPS:	31.6
LUGS:	MLO	EXISTING PANEL		Notes:	
MOUNTING:	SURFACE	**EM**		EXISTING LOAD IS TO REMAIN. NO NEW LOAD	
BUS:	COPPER			IS ADDED TO THIS PANEL.	
DOOR:	STANDARD				

E = EQUIPMENT, K = KITCHEN, L = LIGHTING, H = HEAT, M = MOTOR, M1 = MOTOR (LARGEST), R = RECEPTS

LOCATION: **MDF ROOM**

DF	DESCRIPTION	LOAD	BKR	CIR	A	B	C	CIR	BKR	LOAD	DESCRIPTION	DF
E	(E) COMP. ROOM RECEPTS	180	20/1	1	680			2	20/1	500	CUSTOMER SERVICE	E
E	(E) COMP. ROOM RECEPTS	180	20/1	3		930		4	20/1	750	CHECKSTAND 1,2	E
E	(E) PRINTER	500	20/1	5			1250	6	30/1	750	CHECKSTAND 3,4	E
E	(E) COMP. ROOM RECEPTS	180	20/1	7	930			8	30/1	750	CHECKSTAND 5,6	E
E	(E) COMP. ROOM RECEPTS	180	20/1	9		555		10	20/1	375	NURSERY CHECKSTAND	E
E	(E) COMP. ROOM RECEPTS	180	20/1	11			280	12	20/1	100	SECURITY PANEL	E
E	(E) CASH ROOM RECEPTS	180	20/1	13	360			14	20/1	180	TELE. TERM. BD.	E
E	(E) TRAINING RM. RECEPTS	360	20/1	15		720		16	20/1	360	(E) RECEIVING AREA	E
E	(E) FAX MACHINE	500	20/1	17			750	18	20/1	250	(E) RFA SCANNER	E
E	TIMECLOCK	185	20/1	19	1685			20	30/1	1500	DATA RACK	E
E	(E) DOOR STRIKE - OFFICE	100	20/1	21		1600		22	30/1	1500	DATA RACK	E
E	OFFICE TERMINAL	360	20/1	23			610	24	20/1	250	(E) RECEIVING SCANNER	E
E	OFFICE TERMINAL	360	20/1	25	1610			26	20/1	1250	COPIER	E
E	OFFICE TERMINAL	360	20/1	27		560		28	20/1	200	LEXMARK	E
E	OFFICE TERMINAL	360	20/1	29			610	30	20/1	250	SENSORMATIC	E
E	(E) DOOR STRIKE - EXIT	150	20/1	31	400			32	20/1	250	SENSORMATIC	E
E	SALES FLOOR WORKST.	180	20/1	33		430		34	20/1	250	SENSORMATIC	E
E	SALES FLOOR WORKST.	180	20/1	35			430	36	20/1	250	SENSORMATIC	E
E	CUT CENTER WORKST.	180	20/1	37	180			38	20/1			
E	IDF CABINET	180	20/1	39		180		40	20/1			
			20/1	41			0	42	20/1			
					5845	4975	3930					

AMPS:	100	NEUTRAL BUS:	100%	CON. KVA:	14.8
VOLTAGE:	208	GROUND BUS:	STANDARD	CON. AMPS:	40.9
PHASE / WIRE:	3-PH , 4W	AIC RATING:	10,000	NET KVA:	14.8
MAIN:	90A MCB	NEMA RATING:	1	NET AMPS:	40.9
LUGS:	MLO	EXISTING PANEL		Notes:	
MOUNTING:	SURFACE	**E2**		NEW LOAD ADDED TO EXISTING PANEL	
BUS:	COPPER				
DOOR:	STANDARD				

GENERAL NOTES

1. *FOR ALL MULTI–BRANCH CIRCUITS SHOWN ON THE PLANS AND THE PANEL SCHEDULES, THE CONTRACTOR SHALL COMPLY WITH NEC 2011 SECTION 210.4(B) FOR DISCONNECTING MEANS. CONNECTING 1–POLE BREAKERS TOGETHER TO CREATE 2 AND 3–POLE BREAKERS IS UNACCEPTABLE.*

JP #14128

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BID DOCUMENTS

9/24/14

Orchard
est. 1931
SUPPLY HARDWARE™

18060 CHATSWORTH STREET
GRANADA HILLS, CALIFORNIA

PANEL SCHEDULES

	DATE	REMARKS
1	09/25/2014	BUILDING DEPARTMENT SUBMITTAL
2	11/03/2014	BID SET

PM/ENG:	RP/JS
DRAWN BY:	RP
JOB NO.:	SNR14–0037–00

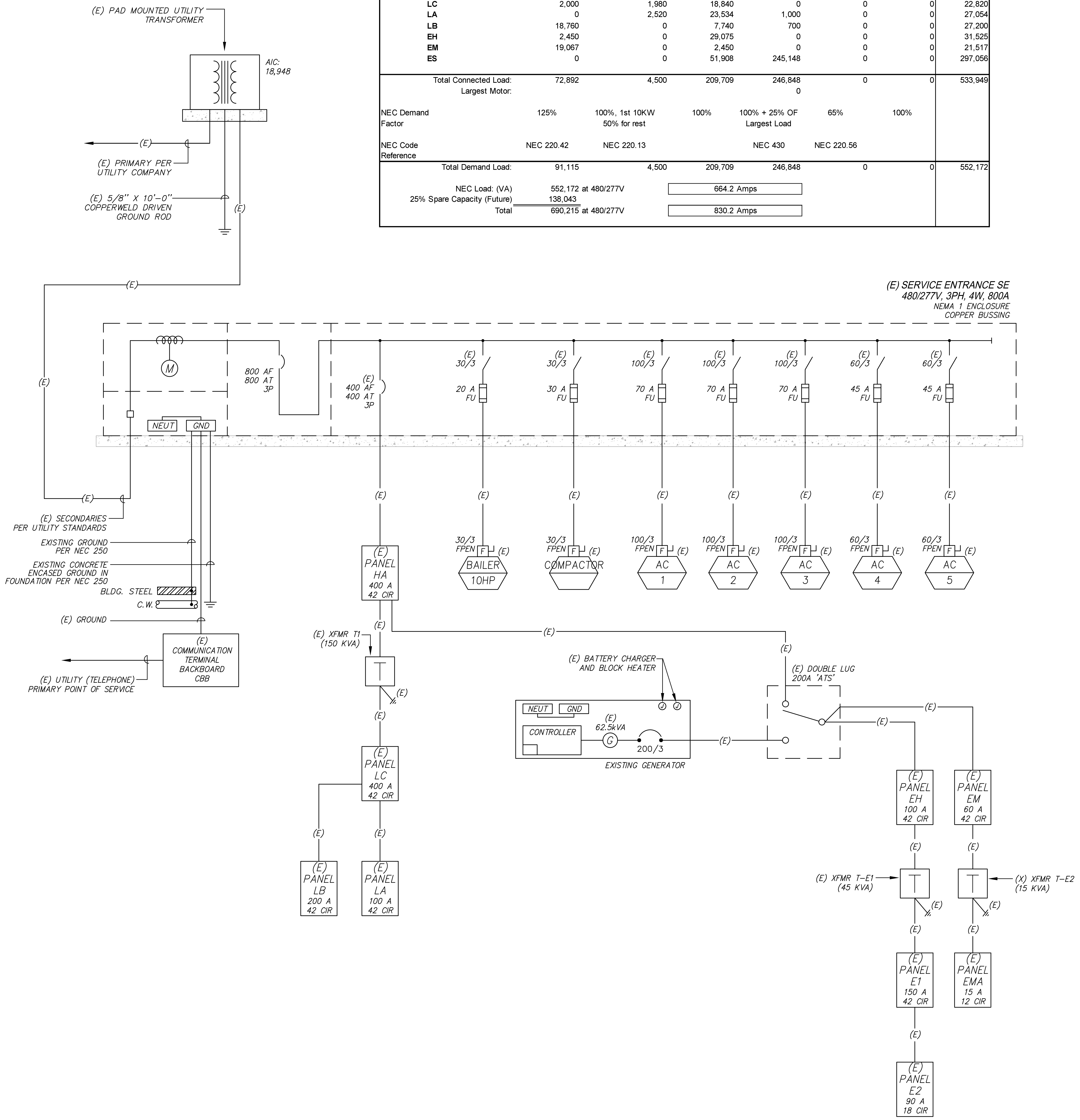
SHEET
E0.3

11/03/2014 BID SET

LOAD CALCULATION: EXISTING SERVICE ENTRANCE

PANEL	LIGHTING	RECEPTS.	EQUIP.	MOTOR	KITCHEN	HEAT	TOTAL
HA	30,615	0	76,162	0	0	0	106,777
LC	2,000	1,980	18,840	0	0	0	22,820
LA	0	2,520	23,534	1,000	0	0	27,054
LB	18,760	0	7,740	700	0	0	27,200
EH	2,450	0	29,075	0	0	0	31,525
EM	19,067	0	2,450	0	0	0	21,517
ES	0	0	51,908	245,148	0	0	297,056
Total Connected Load:	72,892	4,500	209,709	246,848	0	0	533,949
Largest Motor:				0			
NEC Demand Factor	125%	100%, 1st 10KW 50% for rest	100%	100% + 25% OF Largest Load	65%	100%	
NEC Code Reference	NEC 220.42	NEC 220.13		NEC 430	NEC 220.56		
Total Demand Load:	91,115	4,500	209,709	246,848	0	0	552,172

NEC Load: (VA)	552,172 at 480/277V	664.2 Amps
25% Spare Capacity (Future)	138,043	
Total	690,215 at 480/277V	830.2 Amps



A | EXISTING CONDITIONS SINGLE LINE DIAGRAM
E0.4 | SCALE: NOT TO SCALE

JP #14128

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18060 CHATSWORTH STREET
GRANADA HILLS, CALIFORNIA

NEW CONDITIONS SINGLE LINE DIAGRAM

	DATE	REMARKS
1	09/25/2014	BUILDING DEPARTMENT SUBMITTAL
2	11/03/2014	BID SET

PM/ENG:	RP/JS
DRAWN BY:	RP
JOB NO.:	SNR14-0037-00

SHEET
E0.4

11/03/2014 BID SET

LIGHTING CONTROL PANEL LCP-1		
MODEL NUMBER: LC&D #GR2448		
CIRCUIT # / PANEL	DESCRIPTION	RELAY #
25 / LB	WALL LIGHTING DISPLAY	1
27 / LB	WALL LIGHTING DISPLAY	2
29 / LB	WALL LIGHTING DISPLAY	3
31 / LB	WALL LIGHTING DISPLAY	4
33 / LB	WALL LIGHTING DISPLAY	5
1 / LB	LIGHT CLOUD	6
3 / LB	LIGHT CLOUD	7
5 / LB	LIGHT CLOUD	8
7 / LB	LIGHT CLOUD	9
9 / LB	LIGHT CLOUD	10
11 / LB	LIGHT CLOUD	11
13 / LB	LIGHT CLOUD	12
15 / LB	LIGHT CLOUD	13
17 / LB	LIGHT CLOUD	14
19 / LB	LIGHT CLOUD	15
21 / LB	LIGHT CLOUD	16
23 / LB	LIGHT CLOUD	17
2 / HA	NURSERY LIGHTING	18
4 / HA	NURSERY LIGHTING	19
1 / HA	EXISTING RECEIVING AREA LIGHTING	20
3 / HA	EXISTING RECEIVING AREA LIGHTING	21
13 / HA	EXIT CORRIDOR LIGHTING	22
22 / HA	LUMBER AREA LIGHTING	23
24 / HA	LUMBER AREA LIGHTING	24
26 / HA	EXTERIOR BUILDING LIGHTING	25
28 / HA	EXTERIOR BUILDING LIGHTING	26
21 / HA	EXTERIOR NURSERY LIGHTING	27
19 / HA	EXTERIOR ENTRY LIGHTING	28
39 / LB	LANDSCAPE LIGHTING DISPLAY	29
21 / EM	EXISTING LUMBER AREA LIGHTING	30
23 / EM	EXISTING LUMBER AREA LIGHTING	31
28 / E1	EXHAUST FAN EF-3	32
		33
		34
		35
		36
		37
		38
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LIGHTING CONTROL PANEL LCP-1A		
MODEL NUMBER: LC&D #GR2448		
CIRCUIT # / PANEL	DESCRIPTION	RELAY #
40 / LB	VALANCE LIGHTING	1
42 / LB	VALANCE LIGHTING	2
8 / HA	SALES FLOOR LIGHTING (VIA PCC1)	3
10 / HA	SALES FLOOR LIGHTING (VIA PCC1)	4
12 / HA	SALES FLOOR LIGHTING (VIA PCC1)	5
14 / HA	SALES FLOOR LIGHTING (VIA PCC1)	6
16 / HA	SALES FLOOR LIGHTING (VIA PCC1)	7
18 / HA	SALES FLOOR LIGHTING (VIA PCC1)	8
20 / HA	SALES FLOOR LIGHTING (VIA PCC1)	9
1 / EM	SALES FLOOR LIGHTING (VIA PCC1)	10
3 / EM	SALES FLOOR LIGHTING (VIA PCC1)	11
5 / EM	SALES FLOOR LIGHTING (VIA PCC1)	12
7 / EM	SALES FLOOR LIGHTING (VIA PCC1)	13
9 / EM	SALES FLOOR LIGHTING (VIA PCC1)	14
11 / EM	SALES FLOOR LIGHTING (VIA PCC1)	15
13 / EM	SALES FLOOR LIGHTING (VIA PCC1)	16
15 / EM	SALES FLOOR LIGHTING (VIA PCC1)	17
6 / HA	CHECKSTAND LIGHTING	18
27 / EH	MAIN BUILDING SIGNAGE	19
29 / EH	EXTERIOR NURSERY SIGNAGE	20
41 / EH	EXISTING BUILDING SIGNAGE	21
28 / EH	INTERIOR NURSERY SIGNAGE	22
32 / LC	NEON SIGN	23
14 / EM	EXISTING PICK-UP AREA LIGHTING	24
16 / EM	EXISTING PICK-UP AREA LIGHTING	25
18 / EM	EXISTING PICK-UP AREA LIGHTING	26
21 / EM	EXISTING LUMBER AREA LIGHTING	27
23 / EM	EXISTING LUMBER AREA LIGHTING	28
33 / LA	EXHAUST FAN EF-2	29
35 / LA	EXHAUST FAN EF-1	30
		31
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		34
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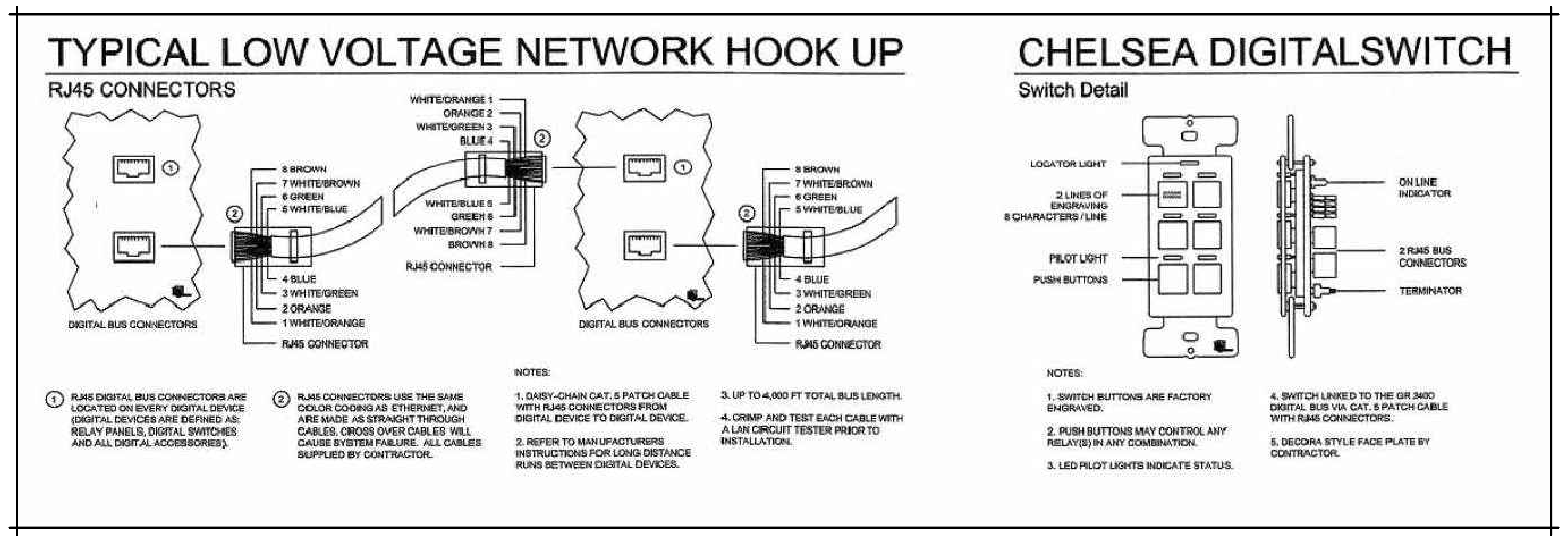

TYPICAL LOW VOLTAGE NETWORK HOOK UP

RJ45 CONNECTORS

① RJ45 DIGITAL BUS CONNECTORS ARE LOCATED ON EVERY DIGITAL DEVICE (DIGITAL DEVICES ARE DEFINED AS: RELAY PANELS, DIGITAL SWITCHES AND ALL DIGITAL ACCESSORIES).

② RJ45 CONNECTORS USE THE SAME COLOR CODING AS ETHERNET, AND ARE MADE AS STRAIGHT THROUGH CABLES. CROSS OVER CABLES WILL CAUSE SYSTEM FAILURE. ALL CABLES SUPPLIED BY CONTRACTOR.

NOTES:

1. DAISY-CHAIN CAT. 5 PATCH CABLE WITH RJ45 CONNECTORS FROM DIGITAL DEVICE TO DIGITAL DEVICE.
2. REFER TO MANUFACTURERS INSTRUCTIONS FOR LONG DISTANCE RUNS BETWEEN DIGITAL DEVICES.
3. UP TO 4,000 FT TOTAL BUS LENGTH.
4. CRIMP AND TEST EACH CABLE WITH A LAN CIRCUIT TESTER PRIOR TO INSTALLATION.

CHELSEA DIGITALSWITCH

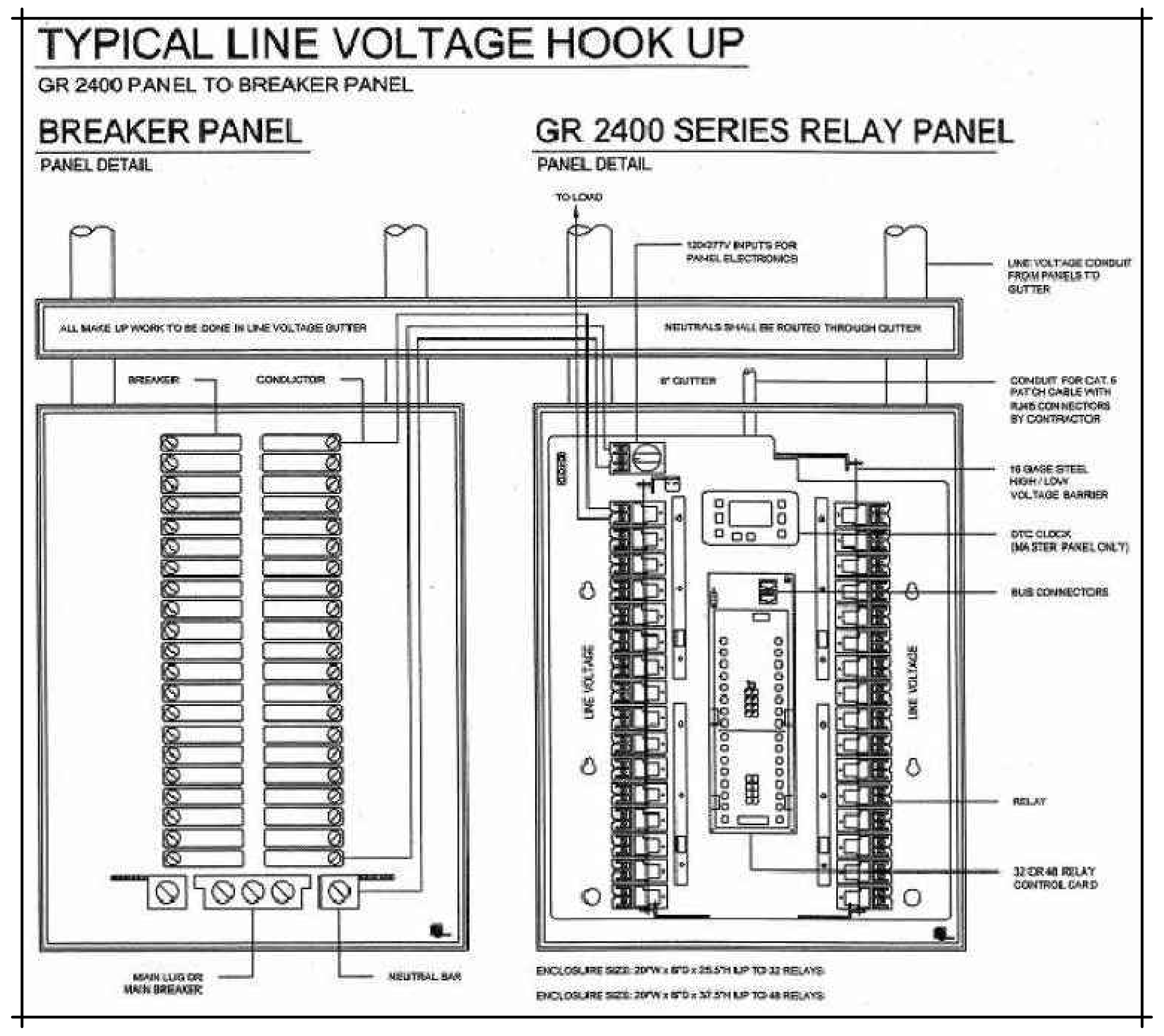
Switch Detail

NOTES:

1. SWITCH BUTTONS ARE FACTORY ENGRAVED.
2. PUSH BUTTONS MAY CONTROL ANY RELAY(S) IN ANY COMBINATION.
3. LED PILOT LIGHTS INDICATE STATUS.
4. SWITCH LINKED TO THE GR 2400 DIGITAL BUS VIA CAT. 5 PATCH CABLE WITH RJ45 CONNECTORS.
5. DECORA STYLE FACE PLATE BY CONTRACTOR.

SCOPE OF WORK:

1. *INSTALL NEW LIGHTING CONTROL SYSTEM PANEL. MOUNT PANEL IN ELECTRICAL ROOM WHERE THE EXISTING PANEL WAS REMOVED.*
2. *ROUTE THE EXISTING CIRCUITS THROUGH THE NEW LIGHTING CONTROL FOR CONTROL OF THE EXISTING LIGHTING LOADS.*
3. *MOUNT CONTROL OVERRIDE (6–BUTTON CHELSEA) IN MANAGERS OFFICE.*


TYPICAL LINE VOLTAGE HOOK UP

GR 2400 PANEL TO BREAKER PANEL

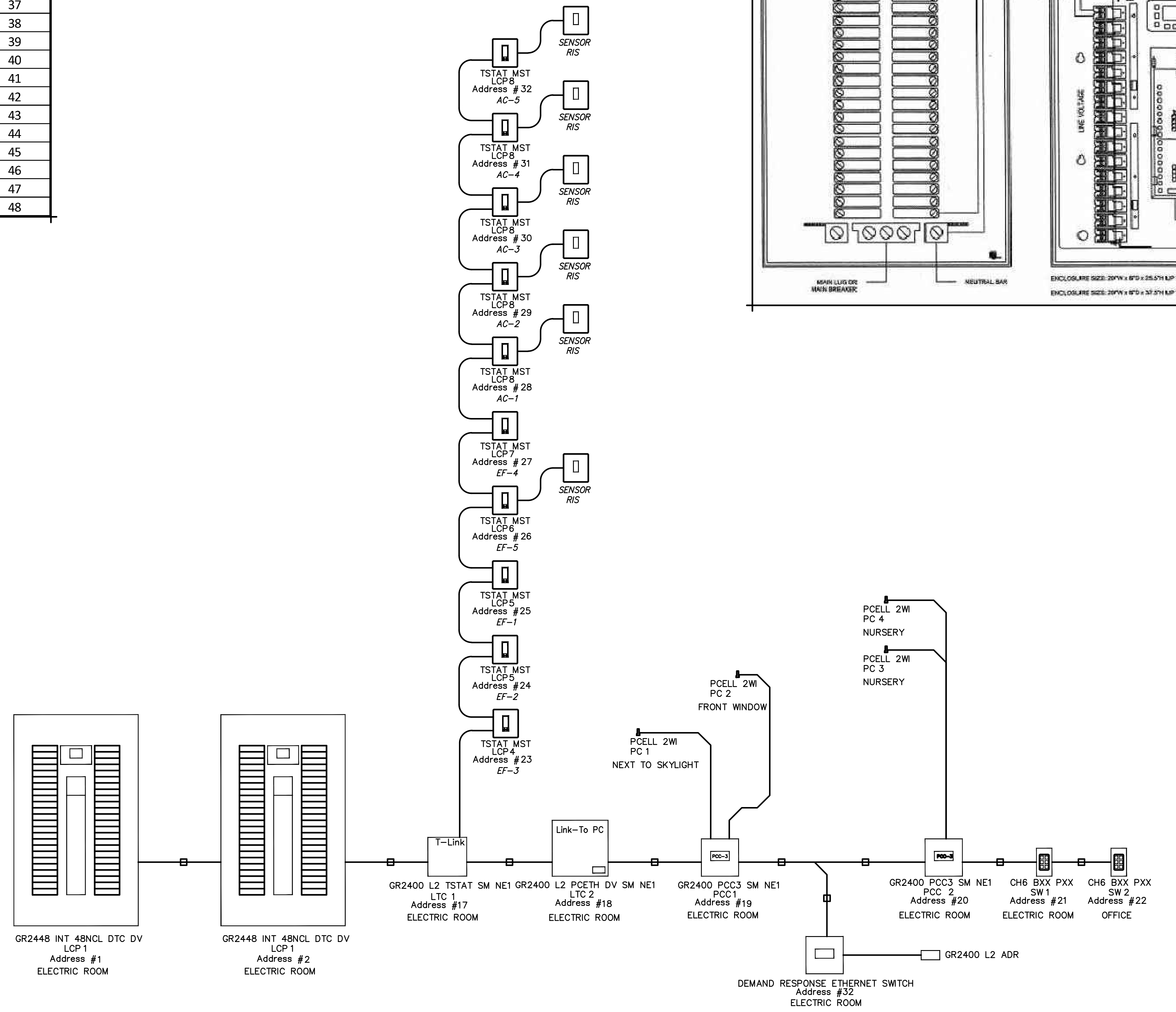
BREAKER PANEL

PANEL DETAIL

GR 2400 SERIES RELAY PANEL

PANEL DETAIL

TO LOAD
120/277V INPUTS FOR PANEL ELECTRONICS
LINE VOLTAGE CONDUIT FROM PANELS TO GUTTER
ALL MAKE UP WORK TO BE DONE IN LINE VOLTAGE GUTTER
NEUTRALS SHALL BE ROUTED THROUGH GUTTER
BREAKER
CONDUCTOR
8" GUTTER
CONDUIT FOR CAT. 6 PATCH CABLE WITH RJ45 CONNECTORS BY CONTRACTOR
16 GAGE STEEL HIGH / LOW VOLTAGE BARRIER
DTC CLOCK (MASTER PANEL ONLY)
BUS CONNECTORS
LINE VOLTAGE
LINE VOLTAGE
RELAY
32 OR 48 RELAY CONTROL CARD
MAIN LUG OR MAIN BREAKER
NEUTRAL BAR
ENCLOSURE SIZE: 20"W x 6"D x 25.5"H UP TO 32 RELAYS
ENCLOSURE SIZE: 20"W x 6"D x 37.5"H UP TO 48 RELAYS


SENSOR RIS
TSTAT MST LCP8 Address #32 AC–5
SENSOR RIS
TSTAT MST LCP8 Address #31 AC–4
SENSOR RIS
TSTAT MST LCP8 Address #30 AC–3
SENSOR RIS
TSTAT MST LCP8 Address #29 AC–2
SENSOR RIS
TSTAT MST LCP8 Address #28 AC–1
TSTAT MST LCP7 Address #27 EF–4
SENSOR RIS
TSTAT MST LCP6 Address #26 EF–5
TSTAT MST LCP5 Address #25 EF–1
TSTAT MST LCP5 Address #24 EF–2
TSTAT MST LCP4 Address #23 EF–3
PCELL 2WI PC 4 NURSERY
PCELL 2WI PC 3 NURSERY
PCELL 2WI PC 2 FRONT WINDOW
PCELL 2WI PC 1 NEXT TO SKYLIGHT
GR2448 INT 48NCL DTC DV LCP 1 Address #1 ELECTRIC ROOM
GR2448 INT 48NCL DTC DV LCP 1 Address #2 ELECTRIC ROOM
T–Link
GR2400 L2 TSTAT SM NE1 LTC 1 Address #17 ELECTRIC ROOM
Link–To PC
GR2400 L2 PCETH DV SM NE1 LTC 2 Address #18 ELECTRIC ROOM
PCC–3
GR2400 PCC3 SM NE1 PCC1 Address #19 ELECTRIC ROOM
PCC–3
GR2400 PCC3 SM NE1 PCC 2 Address #20 ELECTRIC ROOM
CH6 BXX PXX SW 1 Address #21 ELECTRIC ROOM
CH6 BXX PXX SW 2 Address #22 OFFICE
GR2400 L2 ADR
DEMAND RESPONSE ETHERNET SWITCH Address #32 ELECTRIC ROOM

A	*LIGHTING CONTROL SYSTEM DIAGRAM*
E0.5	*SCALE: NO SCALE*

JP #14128

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BID DOCUMENTS
9/24/14

Orchard
est. 1931
SUPPLY HARDWARE

18060 CHATSWORTH STREET
GRANADA HILLS, CALIFORNIA

LIGHTING CONTROLS WIRING DIAGRAM

	DATE	REMARKS
1	09/25/2014	BUILDING DEPARTMENT SUBMITTAL
2	11/03/2014	BID SET

PM/ENG:	RP/JS
DRAWN BY:	RP
JOB NO.:	SNR14–0037–00

SHEET
E0.5

11/03/2014 BID SET

PROJECT GENERAL NOTES

1.	ALL DATA CABLE RUNS SHALL NOT EXCEED 300 LINEAR FEET
2.	DO NOT SNAKE M/C THRU BASE BRACKET HOLES. ALL BOXES TO BE TAPCON ANCHORED, NO SHOTS ALLOWED.
3.	REFER TO ELECTRICAL SHEETS FOR CIRCUIT PANEL INFORMATION.
4.	NO CONDUIT ON WALL BELOW 15'–0" A.F.F.
5.	VERIFY FINAL REVISIONS & EXACT OUTLET LOCATIONS W/ OSH REP. PRIOR TO ROUGH–IN & INSTALLATION. GENERAL CONTRACTOR TO SUPPLY AND INSTALL ITEMS MOUNTED ON FIXTURES.
6.	ALL DISPLAY POWER TO BE 3/8" M.C. FLEX. CONDUIT TO BE RUN UNDERNEATH THE BASE BRACKETS FROM J–BOX TO POWER OUTLETS.
7.	ALL DATA CABLE TO BE LEVEL 5 CATEGORY NO EXCESS CABLE TO BE LEFT BETWEEN TERMINATION POINTS. ALL CABLE TO BE CLEARLY MARKED W/ WIRE NUMBERS AT BOTH ENDS. MAX. RUN PER CABLE IS 300 LINEAR FEET.
8.	OSH VENDOR SHALL PROVIDE AND INSTALL ALL CATEGORY 5 DATA AND PHONE CABLES RJ45 568B (RED) JACK. AVAYA #MP100E OR EQUIVALENT SURFACE MOUNT BLOCK.
9.	CONDUIT DROPS– ISLAND RUNS (SIMILAR TO DETAIL 4/OH–3) PROVIDE NEW 120V CIRCUIT IN NEW 3/4" RIGID CONDUIT FROM J–BOX AT ROOF STRUCTURE MOUNTED ON TRUSS. RUN RIGID THROUGH TOP RAIL KNOCKOUT AND FLEX TO PLUGMOLD.
10.	CONDUIT DROPS – WALL DISPLAYS (SIMILAR TO DETAIL 4/OH–3) PROVIDE NEW 120V CIRCUIT FROM J–BOX AT ROOF STRUCTURE IN NEW 3/4" RIGID CONDUIT SURFACE MOUNT ON WALL, ROUTE THROUGH TOP RAIL KNOCKOUT AND RUN FLEX CONDUIT TO PLUGMOLD/OUTLETS.
11.	GALVANIZED POLE W/CONDUIT INSIDE (SIMILAR TO DETAIL 4/OH–3) PROVIDE NEW 120V CIRCUIT AND PROVIDE (2) – 1/4" O.D. GALVANIZED PIPE FROM J–BOX AT ROOF STRUCTURE TO MINNERS HUB ON FLOOR. FLEX FROM CUT OUT TO DUPLEX SWITCH.
12.	POWER POLE DROP – REGISTERS & SERVICE COUNTERS – (SIMILAR TO DETAIL 4/OH–3) PROVIDE NEW 120V CURCUIT FROM J–BOX AT ROOF STRUCTURE. RUN 3x5 POWER POLE FROM ROOF STRUCTURE DOWN TO COUNTER TOP. POWER POLE TO HAVE SEPARATE RACEWAYS TO DIVIDE POWER FROM DATA.
13.	ELECTRICAL CONTRACTOR TO SUPPLY AND INSTALL ALL CONDUITS, WIRE AND JUNCTION BOXES FOR DROPS TO FIXTURES. ELECTRICAL CONTRACTOR SHALL HARDWIRE TO CEILING/WALL MOUNTED JUNCTION BOXES FROM FIXTURES AS APPLICABLE. ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL ALL ELECTRICAL MATERIAL (AS SHOWN IN DRAWINGS) FROM END DEVICES IN FIXTURES TO CEILLING/WALL MOUNTED JUNCTION BOX AND MAKE FINAL CONNECTIONS. ELECTRICAL CONTRACTOR SHALL COORDINATE THE ELECTRICAL INSTALLATION WITH THE VENDOR INSTALLING THE FIXTURES SO THAT THE PROGRESS OF THE WORK IS NOT DELAYED.

POWER AND SIGNAL PLANS SHEET NOTES

A	PROVIDE (1) 3" CONDUIT FROM END OF LADDER RACK IN DATA ROOM TO SALES FLOOR FOR CAMERA SYSTEM.
A1	PROVIDE (1) 3" CONDUIT FROM SECURITY BOARD IN DATA ROOM TO SALES FLOOR FOR SECURITY.
A2	PROVIDE (1) 3" CONDUIT FROM SECURITY BOARD IN DATA ROOM TO SALES FLOOR FOR FIRE ALARM.
A3	PROVIDE (1) 3" CONDUIT FROM SECURITY BOARD IN DATA ROOM TO SALES FLOOR FOR DATA, VOICE AND MUSIC SYSTEMS.
A4	PROVIDE (1) 2" CONDUIT FROM SECURITY BOARD IN DATA ROOM TO OFFICES FOR DATA, VOICE AND MUSIC SYSTEMS.
B	PROVIDE (1) 1–1/2" CONDUIT FROM TELEPHONE ROOM TO END OF LADDER RACK IN DATA ROOM FOR 25–PAIR FEEDER.
C	PROVIDE 3/4"x4'x4' PLYWOOD BACKBOARD, PAINTED WITH FIRE RETARDANT PAINT ON THE WALL BEHIND THE LADDER RACK FOR THE TELEPHONE TERMINAL BOARD.
D	PROVIDE 3/4"x4'x4' PLYWOOD BACKBOARD, PAINTED WITH FIRE RETARDANT PAINT ON THE WALL SIDE OF THE LADDER RACK FOR RACK MOUNT.
E	PROVIDE 3/4"x4'x4' PLYWOOD BACKBOARD, PAINTED WITH FIRE RETARDANT PAINT ON THE RIGHT WALL FOR THE ALARM AND SECURITY SYSTEM.
F	PROVIDE A DEDICATED 1–1/2" CONDUIT FROM THE END OF THE LADDER RACK IN DATA ROOM TO THE IDF CABINET FOR 25–PAIR AND FIBER.
G	PROVIDE A 2" CONDUIT PENETRATION THROUGH THE NURSERY WALL FOR DATA, VOICE AND MUSIC SYSTEMS. PROVIDE PROTECTIVE GROMMETS AT EACH END OF THE CONDUIT TO PROTECT CABLES.
H	PROVIDE A 1" CONDUIT PENETRATION THROUGH THE FRONT WALL FOR DATA, VOICE AND MUSIC SYSTEMS. PROVIDE PROTECTIVE GROMMETS AT EACH END OF THE CONDUIT TO PROTECT CABLES.
J	LIGHT CLOUD INSTALLATION – CIRCUITS SHALL BE ROUTED THROUGH THE LIGHTING CONTROL PANEL FOR ON/OFF CONTROL. THE LIGHT CLOUD REQUIRES (12) TWELVE 20 AMP, 120V CIRCUITS. EACH TRACK HAS (2) BRANCH CIRCUITS AND THE ELECTRICIAN NEEDS TO DISTRIBUTE THE CIRCUITS SO THAT EVERY OTHER LIGHT FIXTURE IS PLUGGED INTO A DIFFERENT CIRCUIT. THERE ARE (6) SIX TRACKS TOTAL AND THE CIRCUITS NEED TO BE BALANCED THROUGHOUT THE LIGHT CLOUD. INSTALL JUMPERS BETWEEN THE TRACKS. ATTACH LARGE JUNCTION BOXES ON TOP OF THE COLUMNS HIDING THE MC CABLE AS MUCH AS POSSIBLE ABOVE THE TRACK. VERIFY EXACT REQUIREMENTS WITH ORCHARD REPRESENTATIVE JOE GONZALEZ (408) 981–1795.
K	WALL LIGHTING DISPLAY – THE DISPLAY TAKES (3) THREE BRANCH CIRCUITS AND THEY SHALL BE ROUTED THROUGH THE LIGHTING CONTROL PANEL.
L	8" WIDE, 4" DEEP DATA TRAY. VERIFY EXACT LOCATION AND REQUIREMENTS WITH ORCHARD PRIOR TO ROUGH–IN.
M	PROVIDE (1) 1" CONDUIT FROM CHECK STAND TO CEILING FOR (2) DATA AND (1) VOICE. PROVIDE (1) LOW–VOLTAGE DUPLEX BOX FOR (3) DATA AND (1) PHONE EACH.
N	PROVIDE (1) 1" CONDUIT CUSTOMER SERVICE DESK TO CEILING FOR (6) DATA AND (2) VOICE. PROVIDE (2) LOW–VOLTAGE DUPLEX BOXES FOR (3) DATA AND (1) PHONE EACH.
P	PROVIDE (1) 3/4" CONDUIT FROM WORKSTATIONS TO CEILING FOR (3) DATA AND (1) VOICE. PROVIDE (1) LOW–VOLTAGE DUPLEX BOX FOR (3) DATA AND (1) PHONE EACH.
R	PROVIDE (1) 3/4" CONDUIT STUBBED TO ABOVE CEILING FROM EACH TERMINAL, PRINTER AND COPIER LOCATION. PROVIDE (1) LOW–VOLTAGE DUPLEX BOX FOR DATA AND VOICE AT EACH TERMINAL, PRINTER AND COPIER LOCATION. ALL POWER AND DATA BOXES SHALL BE BELOW DESK.
S	PROVIDE (1) 1" CONDUIT FROM RECEIVING DESK TO CEILING FOR TERMINALS AND PRINTERS. PROVIDE (1) LOW–VOLTAGE 4–SQUARE BOX FOR DATA AND VOICE FOR TERMINALS AND PRINTERS. ALL POWER AND DATA BOXES SHALL BE BELOW DESK.
T	PROVIDE (2) 1" DIAMETER CONDUIT ON CEDAR POST AT CHECK STAND, (1) FOR DATA AND (1) FOR POWER.
U	PROVIDE (1) 1" DIAMETER CONDUIT ON CEDAR POST AT CUSTOMER SERVICE DESK FOR POWER AND (1) 1–1/2" CONDUIT ON CEDAR POST FOR DATA.
V	IDF BOX PROVIDED AND INSTALLED BY ORCHARD. CONTRACTOR SHALL PROVIDE (1) DEDICATED 20 AMP DUPLEX RECEPTACLE FROM EMERGENCY PANEL FOR CLEAN, GENERATED POWER FOR IDF CABINET AND (2) 3" CONDUITS FROM CABINET TO CEILING FOR DATA, VOICE AND CAMERA CABLES.
W	PROVIDE (1) 3/4" CONDUIT ROUTED IN WALL TO LOW–VOLTAGE DUPLEX BOX FOR TIMECLOCK. VERIFY EXACT LOCATION WITH ORCHARD PRIOR TO ROUGH–IN.
Y	PROVIDE (1) DOUBLE DUPLEX AND (1) VOICE/DATA OUTLET INSIDE A NEMA 3R, LOCKABLE ENCLOSURE. VERIFY EXACT LOCATION WITH ORCHARD PRIOR TO ROUGH–IN.

PROJECT SHEET NOTES

1	SHARPENING BENCH– (1) 4" SQ. J–BOX (PROVIDED BY OTHERS PREMOUNTED). ELECTRICAL CONTRACTOR SHALL PROVIDE (2) 120V, 20 AMP CIRCUITS W/ (5) IVORY DUPLEX RECEPTACLES AND A SINGLE METAL COVER. EACH MOUNTED TO A 4" SQUARE JUNCTION BOX. (2) TOGGLE SWITCH WIRED TO ACTIVATE POWER TO OUTLETS MOUNTED ON CEDAR POST AT +46" ABOVE FINISHED FLOOR. POWER WILL RUN SMALL MOTOR TOOLS – CHAINSAW SHARPENER, KNIFE SHARPENER, SMALL BELT STRAP SANDER. REFER TO DETAILS ON E5.1 FOR MORE INFORMATION.
2	KEY MACHINE – ELECTRICAL CONTRACTOR TO PROVIDE (3) 120V, 20 AMP CIRCUITS, (1) 4" SQ. J–BOX W/ (2) IVORY DUPLEX RECEPTACLES MOUNTED TO FLOOR WITH BRACKET BOX FACING IN TOWARDS WORK AREA.
3	SELF CUTTING KEY MACHINE – (1) IVORY DUPLEX RECEPTACLE MOUNTED TO FLOOR WITH BRACKET BOX FACING OUT TOWARDS KICKPLATE, OR MOUNTED INTO WALL. SEE DRAWING FOR MOUNTING.
4	VALANCE LIGHTING – (1) 4" SQ J–BOX W/INDUSTRIAL COVER MOUNTED TO FLOOR WITH BRACKET BOX. WHIP TO 4' T–8 FLUORESCENT LIGHT. DAISY CHAIN LIGHT FIXTURES TOGETHER. FIGARDEN: FIXTURES ARE IN 2 LOCATIONS. SEE PLAN FOR LAYOUT.
5	CABINET HARDWARE – (1) IVORY DUPLEX RECEPTACLE MOUNTED TO FLOOR WITH BRACKET BOX FACING OUT TOWARDS KICKPLATE
6	CEDAR POST FOR CONDUIT DROPS – 4" X 4", PROVIDED TO SECURE CONDUIT DROPS.
7	ROTARY TOOLS – (1) IVORY DUPLEX RECEPTACLE MOUNTED TO FLOOR WITH BRACKET BOX FACING OUT TOWARDS KICKPLATE.
8	NOT USED
11	DOORBELLS – CATEGORY REQUIRES LOW VOLTAGE (16VA & 10 VA) 10 AMPS TOTAL. PROVIDE ONE IVORY DUPLEX RECEPTACLE MOUNTED TO FLOOR WITH BRACKET BOX FACING OUT TOWARDS KICKPLATE.
12	LAMP DISPLAY – (1) DOUBLE DUPLEX FOR LAMPS MOUNTED TO FLOOR WITH BRACKET BOX FACING UP.
13	LANDSCAPE LIGHTING– CATEGORY REQUIRES 600 WATTS/5 AMPS TOTAL. PROVIDE ONE IVORY DUPLEX RECEPTACLE PER SECTION MOUNTED TO FLOOR WITH BRACKET BOX FACING OUT TOWARDS KICKPLATE @ 3RD, 4TH, 5TH & 6TH SECTION.
14	TASK LIGHTING – CATEGORY REQUIRES 1160 WATTS/ 9.66 AMPS TOTAL PROVIDE ONE IVORY DUPLEX RECEPTACLE MOUNTED TO FLOOR WITH BRACKET BOX FACING OUT TOWARDS KICKPLATE.
15	LAMP GLASS – (1) IVORY DUPLEX RECEPTACLE MOUNTED TO FLOOR WITH BRACKET BOX FACING OUT TOWARDS KICKPLATE.
16	NOT USED
17	WALL MOUNTED – CATEGORY REQUIRES 1000 WATTS/8.33 AMPS PER PANEL. PROVIDE ONE IVORY DUPLEX RECEPTACLE PER SECTION MOUNTED TO FLOOR WITH BRACKET BOX FACING OUT TOWARDS KICKPLATE.
19	BATH VENTS – CATEGORY REQUIRES 22.8 AMPS TOTAL. PROVIDE ONE IVORY DUPLEX RECEPTACLE PER SECTION MOUNTED TO FLOOR WITH BRACKET BOX FACING OUT TOWARDS KICKPLATE @ 1ST & 2ND SECTION.
21	NOT USED
22	ORGANIC PEST CONTROL REFRIGERATOR – PROVIDE (1) 120V IVORY DUPLEX RECEPTACLE MOUNTED 15" AFF. EMS SYSTEM SHALL NOT CONTROL THIS CIRCUIT.
23	(5) GALLON PAINT SHAKER– GENERAL CONTRACTOR TO SUPPLY AND INSTALL ORANGE DUPLEX RECEPTACLE WITH DEDICATED ISOLATED GROUND CIRCUIT. PROVIDE (1) 120V CIR. #8 WIRE. PROVIDE ORANGE RECEPTACLE W/ STAINLESS STEEL PLATE. MOUNTED TO FLOOR WITH BRACKET BOX FACING OUT TOWARDS KICKPLATE.
24	(1) GALLON PAINT SHAKER – GENERAL CONTRACTOR TO SUPPLY AND INSTALL ORANGE DUPLEX RECEPTACLE WITH DEDICATED ISOLATED GROUND CIRCUIT. PROVIDE (1) 120V CIR. #10 WIRE CONNECTED TO A PANEL ON STANDBY POWER. PROVIDE ORANGE RECEPTACLE W/ STAINLESS STEEL PLATE. MOUNTED TO FLOOR WITH BRACKET BOX FACING OUT TOWARDS KICKPLATE.
25	HERO MACHINE – GENERAL CONTRACTOR TO SUPPLY AND INSTALL ORANGE DUPLEX RECEPTACLE WITH DEDICATED ISOLATED GROUND CIRCUIT. PROVIDE (1) 120V. CIR. #10 WIRE CONNECTED TO A PANEL ON STANDBY POWER. PROVIDE ORANGE RECEPTACLE W/ STAINLESS STEEL PLATE. MOUNTED TO FLOOR WITH BRACKET BOX FACING OUT TOWARDS KICKPLATE.
26	COLOR MATCH MACHINE & MONITOR – GENERAL CONTRACTOR TO SUPPLY & INSTALL ORANGE DOUBLE DUPLEX RECEPTACLE WITH DEDICATED ISOLATED GROUND CIRCUIT. PROVIDE ONE 120V. CIR. #10 WIRE CONNECTED TO A PANEL ON STANDBY POWER. PROVIDE ORANGE RECEPTACLE WITH STAINLESS STEEL PLATE. MOUNTED TO FLOOR WITH BRACKET BOX FACING OUT TOWARDS KICKPLATE.
27	PAINT COUNTER SUPPORT POWER – ONE IVORY DUPLEX RECEPTACLE W/ STAINLESS STEEL PLATE (2 LOCATIONS). MOUNTED TO FLOOR WITH BRACKET BOX FACING OUT TOWARDS KICKPLATE.
28	PROMO POWER – GENERAL CONTRACTOR TO PROVIDE 120V 20 AMP CIRCUITS. PROVIDE ONE IVORY DUPLEX RECEPTACLE MOUNTED TO FLOOR WITH BRACKET BOX FACING OUT TOWARDS KICKPLATE.
29	END CAP POWER – PROVIDE ONE DUPLEX MOUNTED TO FLOOR WITH BRACKET BOX FACING OUT TOWARDS KICKPLATE. REFER TO FLOOR PLAN FOR LOCATIONS.
30	SHOP & STRIP LIGHTS – CATEGORY REQUIRES 300 WATTS/ 2.5 AMPS TOTAL. PROVIDE ONE IVORY DUPLEX RECEPTACLE MOUNTED TO FLOOR WITH BRACKET BOX FACING OUT TOWARDS KICKPLATE.
31	COLOR CENTER – CATEGORY REQUIRES 129 WATTS/ 1.07 AMPS TOTAL. PROVIDE ONE IVORY DUPLEX RECEPTACLE MOUNTED TO FLOOR WITH BRACKET BOX FACING OUT TOWARDS KICKPLATE.
32	CORD REELS – GENERAL CONTRACTOR TO FURNISH AND INSTALL RECTRACTABLE CORD REELS, MODEL SL–8906 BY BAYCO. CORD REELS TO BE MOUNTED FROM CEILING STRUCTURE WITH BOTTOM OF CORD REEL @ B.O.B.J. WITH CORD STOP @ 14 FEET.
33	COLUMN MOUNTED POWER – ONE IVORY DUPLEX RECEPTACLE MOUNTED ON COLUMN, 12" A.F.F. PROVIDE (1) CIRCUIT FOR (2) DUPLEXES. SEE DETAIL 8/OH–3.
34	CONDUIT DROP LOCATION – 1/2" RIGID CONDUIT TO A 90 DEGREE UNDER BASE DECK TO A FLOOR MOUNTED BRACKET BOX. PROVIDE IVORY DUPLEX RECEPTACLE WITH INDUSTRIAL COVER – WHIP TO NEXT UNDER DECK BOX IN THAT RUN. MULTIPLE CIRCUITS MAY BE REQUIRED @ EACH DROP.
35	SODA COOLERS – PROVIDE (2) DEDICATED 120V 20 AMP CIRCUITS MOUNTED ON UNDER CHECK STANDS FOR (2) IVORY DUPLEX RECEPTACLES.
36	PIPE CUTTER – PROVIDE DEDICATED 120V 20AMP CIRCUIT. ONE IVORY DUPLEX RECEPTACLE MOUNTED ON FLOOR. CONTRACTOR TO VERIFY THE NEMA TYPE OF RECEPTACLE WITH OWNER PROVIDED EQUIPMENT PRIOR TO INSTALL.
37	FOUNTAIN & SANCTUARY FLATS IN NURSERY – (1) GFI DOUBLE DUPLEX 15" A.F.F. PROVIDE 120V POWER. CONTROLLED BY GFCI BREAKER IN PANEL. PROVIDE WEATHER PROOF COVER MM 7440C TAYMAC. CIRCUITS FROM CONTACTOR, CONTROLLED BY SMART BREAKER. PUT ON DEDICATED CIRCUITS.
38	STORE FRONT POWER – (1) GFI DUPLEX RECEPTACLE 15" A.F.F. PROVIDE 120V POWER CONTROLLED BY GFCI BREAKER IN PANEL. PROVIDE TAYMAC WEATHER PROOF COVER. CIRCUITS FROM CONTACTOR, CONTROLLED BY SMART BREAKER.
39	NEON SIGN – (1) IVORY DUPLEX RECEPTACLE 11'–0" A.F.F.
40	PUBLIC VIEW MONITOR – MOUNT IN FRONT OF ENTRANCE/EXIT 20' – 22' IN FROM THRESHOLD. MOUNT MONITOR AT +9'–6" AFF. ALL PVM'S WILL HAVE A LOW–VOLTAGE CABLE ROUTED TO DATA ROOM PROVIDED AND INSTALLED BY THE CCTV VENDOR.
42	CUSTOMER SERVICE SAFE – GALVANIZED POLE WITH CONDUIT INSIDE. PROVIDE 120V CIRCUIT AND PROVIDE 2–1/4" O.D. GALVANIZED PIPE FROM JUNCTION BOX AT CEILING LEVEL TO MINNERS HUB ON FLOOR. ROUTE FLEXIBLE CONDUIT FROM CUTOUT TO DUPLEX RECEPTACLE. CONNECT TO AN GENERATOR BACKED UP PANEL.
43	HALLWAY SENSORMATIC DIGITAL PROMAX (INTERIOR) STANCHIONS – ELECTRICAL REQUIREMENTS ARE 110V, 24 HOUR DEDICATED UNSWITCHED CIRCUIT. THERE SHOULD BE NO MORE THAN 0.5 VOLTS BETWEEN NEUTRAL AND GROUND. PROVIDE DUPLEX RECEPTACLE ABOVE DROP CEILING ON SAME LINE. PROVIDE 3/4" CONDUIT BURIED BENEATH FINISHED FLOOR WHERE APPLICABLE. PER EAS INSTALLATION REQUIREMENTS. POWER SHALL NOT BE SHARED WITH NEON SIGNS, ELECTRICAL MOTORS, VENDING MACHINES, ATM'S OR OTHER ELECTRICAL NOISE GENERATING DEVICES. CONDUIT RACEWAYS ARE NOT A SUITABLE GROUND FOR EAS EQUIPMENT. ELECTRICAL CONTRACTOR MUST LABEL THE CIRCUIT BREAKER IN THE PANEL AS 'EAS'. KEEP EAS PEDESTALS AT MINIMUM 6'–0" AWAY FROM NOISE SOURCES SUCH AS COMPUTER MONITORS, CASH REGISTERS, DEBIT/CREDIT PIN PADS, SWITCHING POWER SUPPLIES AND OTHER EAS DEVICES.
44	CLOSED CIRCUIT TELEVISION – ALL CCTV SURVEILLANCE CAMERAS SHALL RUN ON LOW–VOLTAGE CABLES EITHER SIAMESE AND/OR CAT5/CAT6 CABLE, DEPENDING ON SYSTEM. CCTV VENDOR TO PROVIDE CABLE. CABLE VENDOR SHALL BE RESPONSIBLE FOR RUNNING, TERMINATING AND TESTING EACH LINE FOR CONNECTIVITY. CABLE TO BE INSTALLED PER LOCAL AND STATE CODE. CCTV VENDOR SHALL BE RESPONSIBLE FOR FINAL INSTALL OF TERMINATING AND INSTALL OF THE CCTV. DEVICE LOCATIONS ARE SPECIED ON THE LOW–VOLTAGE SET OF PLANS.
45	MAIN ENTRANCE/EXIT ELECTRONIC ARTICLES SURVEILLANCE SYSTEM (EAS) PROMAX – ELECTRICAL REQUIREMENTS ARE 110V, 24 HOUR DEDICATED UNSWITCHED CIRCUIT. THERE SHOULD BE NO MORE THAN 0.5 VOLTS BETWEEN NEUTRAL AND GROUND. PROVIDE DUPLEX RECEPTACLE ABOVE DROP CEILING OR AT MAX HEIGHT OF 12'–0" AFF ON SAME LINE. EAS VENDOR TO INSTALL AND MOUNT POWER PACK AT DESIGNATED LOCATION WITH POWER PROVIDED. PROVIDE 3/4" CONDUIT BURIED BENEATH FINISHED FLOOR WHERE APPLICABLE. PER EAS INSTALLATION REQUIREMENTS, POWER SHALL NOT BE SHARED WITH NEON SIGNS, ELECTRICAL MOTORS, VENDING MACHINES, ATM'S OR OTHER ELECTRICAL NOISE GENERATING DEVICES. CONDUIT RACEWAYS ARE NOT A SUITABLE GROUND FOR EAS EQUIPMENT. ELECTRICAL CONTRACTOR MUST LABEL THE CIRCUIT BREAKER IN THE PANEL AS 'EAS'. KEEP EAS PEDESTALS AT MINIMUM 6'–0" AWAY FROM NOISE SOURCES SUCH AS COMPUTER MONITORS, CASH REGISTERS, DEBIT/CREDIT PIN PADS, SWITCHING POWER SUPPLIES AND OTHER EAS DEVICES.
50	R.F. ANTENNA – MOUNT 1'–0" BELOW SUSPENDED CEILING OR AT +12'–0" AFF FACING REAR OF STORE WHEN ROOF STRUCTURE IS EXPOSED. PULL CAT5 DATA CABLE FROM ANTENNA LOCATION TO COMPUTER ROOM WITH 6'–0" OF EXCESS CABLE COILED AT EACH END. TERMINATE SALES FLOOR END WITH RJ45 568B (RED) JACK. AVAYA #MP100E OR EQUIVALENT SURFACE MOUNTED BLOCK.
50	BROADWAY SIGN – PROVIDE (1) DUPLEX MOUNTED TO FLOOR WITH BRACKET BOX FACING OUT TOWARDS KICK PLATE. REFER TO OSH FIXTURE PLAN FOR LOCATION.
51	NIGHT BELL – GENERAL CONTRACTOR TO FURNISH AND INSTALL A NIGHT BELL ON BACKSIDE OF COLUMN AT CEILING STRUCTURE AT +16'–0" AFF.
53	DATA DROP LOCATION – 1/2" RIGID CONDUIT TO A 90 DEGREE UNDER BASE DECK TO A FLOOR MOUNTED BRACKET BOX. PROVIDE IVORY DUPLEX WITH INDUSTRIAL COVER AND WHIP TO LOCATION.
54	CHECKSTAND REGISTER – SEE DETAIL 1/OH–3A (1) 4" SQ. J–BOX W/ (2) ORANGE DUPLEX RECEPTACLES WITH DEDICATED ISOLATED GROUND CIRCUITS (1) 4" SQ. J–BOX W/ (2) IVORY DUPLEX RECEPTACLES POWER FOR REGISTER LIGHTS. (1) SINGLE GANG J–BOX W/ ORANGE DUPLEX RECEPTACLES WITH DEDICATED ISOLATED GROUND CIRCUITS POWER LOCATED BELOW SCANNER PAD IN CABINET. DO NOT COMBINE REGISTER AND SCANNER ON SAME CIRCUITS. 4" SQ. GROMMET FOR (2) DATA AND (2) PHONE CABLES. AVAYA 102 CONNECT INTO SMB ELEC. IVORY BLOCK W RJ45 JACKS (RED & IVORY) ADJACENT TO PROCESSOR. PROVIDED AND INSTALLED BY OSH VENDOR. (2) CIRCUITS REQUIRED FOR IVORY RECEPTACLES TO BE ABLE TO ADD A COKE MACHINE.
58	CHECKSTAND PHONES – MOUNT PHONE ON PEDESTALS ADJACENT TO CHECKSTAND LIGHT. DETAIL 1/OH–3A.
59	TELEPHONES – PHONES LOCATED ON BACK OF COLUMNS. PROVIDE J–BOX @ 54" A.F.F. RUN 3/4" CONDUIT ON COLUMN TO CEILING STRUCTURE. PHONES LOCATED ON FIXTURE MOUNT J–BOX ON FLOOR, PROVIDE 3/4" CONDUIT WITH PULL CORD TAGGED PHONE.
60	WALL PHONES – RUN 3/4 CONDUIT IN WALL TO ROOF STRUCTURE. MOUNT J–BOX IN WALL @ 54" A.F.F. MAX. 12" FROM DOOR OPENING.
62	SMS TERMINAL & WEB – (1) 4" SQ. J–BOX W/ (1) ORANGE DUPLEX RECEPTACLE WITH DEDICATED ISOLATED GROUND CIRCUIT & (1) IVORY DUPLEX RECEPTACLE FOR PRINTER. (1) SINGLE GANG BOX WITH RUBBER GROMMET FOR DATA/PHONE.
63	HANDICAP CART – PROVIDE (1) DUPLEX RECEPTACLE WITH DEDICATED 120 VOLT, 20 AMP CIRCUIT.

JP #14128

JP
ENGINEERING
10597 Double R Blvd.
Reno, Nevada 89521
P: 775.852.2337
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BID DOCUMENTS
9/24/14

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18060 CHATSWORTH STREET
GRANADA HILLS, CALIFORNIA

PROJECT SHEET NOTES

	DATE	REMARKS
1	09/25/2014	BUILDING DEPARTMENT SUBMITTAL
2	11/03/2014	BID SET

PM/ENG:	RP/JS
DRAWN BY:	RP
JOB NO.:	SNR14–0037–00

SHEET

E0.6

11/03/2014 BID SET

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 06/14)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE – USER INSTRUCTIONS	NRCC-LTI-01-E
Indoor Lighting	(Page 3 of 5)
Project Name: OSH Granada Hills	Date Prepared: 9/24/2014

A separate Lighting Schedule Must Be Filled Out for Conditioned and Unconditioned Spaces. Installed Lighting Power listed on this Lighting Schedule is only for:
☐ **CONDITIONED SPACE** ☑ **UNCONDITIONED SPACE**

A. INDOOR LIGHTING SCHEDULE and FIELD INSPECTION ENERGY CHECKLIST

- ☐ The actual indoor lighting power listed on this page and on the next page includes all installed permanent and planned portable lighting systems.
- ☐ When Complete Building Method is used for compliance, list each different type of luminaire on separate lines.
- ☐ When Area Category Method or Tailored Method is used for compliance, list each different type of luminaire by each different function area on separate lines
- ☐ Also include track lighting in schedule, and submit the track lighting compliance form (NRCC-LTI-05-E) when line-voltage track lighting is installed.

B. Installed Portable Luminaires in Offices – Exception to Section 140.6(a)

- ☐ This section shall be filled out ONLY for portable luminaires in offices (As defined in §100.1). All other planned portable luminaires shall be documented on next page of this compliance form.
- ☐ This section is used to determine if greater than 0.3 watts of portable lighting is planned for any office
- ☐ Fill out a separate line for each different office. Small offices that are typical (having the same general and portable lighting) may be grouped together. This allowance shall not be traded between offices having different lighting systems.

Office Portable Luminaire Schedule	Office Installed Portable Luminaire Watts Per Square Foot						Accountable Watts	Office Location	Field Inspector	
A	B	C	D	E	F	G	H	I	J	
Complete Luminaire Description (i.e., LED, under cabinet, furniture mounted direct/indirect)	Watts per Luminaire	Number of Luminaires	Installed portable luminaire watts in this office (B x C)	Square feet of this office	Watts per square foot (D / E)	If F ≤ 0.3, enter zero; if F > 0.3, (F-0.3)	E x G	Identify Office area in which these portable luminaires are installed	Pass	Fail
									☐	☐
									☐	☐
									☐	☐
									☐	☐
									☐	☐
Total installed portable luminaire watts that are greater than 0.3 watts per square foot per office:								Enter sum total of all pages into NRCC-LTI-01-E; Page 1		

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 06/14)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE – USER INSTRUCTIONS	NRCC-LTI-01-E
Indoor Lighting	(Page 3 of 5)
Project Name: OSH Granada Hills	Date Prepared: 9/24/2014

A separate Lighting Schedule Must Be Filled Out for Conditioned and Unconditioned Spaces. Installed Lighting Power listed on this Lighting Schedule is only for:
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A	B	C	D	E	F	G	H	I	J	
Complete Luminaire Description (i.e., LED, under cabinet, furniture mounted direct/indirect)	Watts per Luminaire	Number of Luminaires	Installed portable luminaire watts in this office (B x C)	Square feet of this office	Watts per square foot (D / E)	If F ≤ 0.3, enter zero; if F > 0.3, (F-0.3)	E x G	Identify Office area in which these portable luminaires are installed	Pass	Fail
									☐	☐
									☐	☐
									☐	☐
									☐	☐
									☐	☐
Total installed portable luminaire watts that are greater than 0.3 watts per square foot per office:								Enter sum total of all pages into NRCC-LTI-01-E; Page 1		

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 06/14)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE – USER INSTRUCTIONS	NRCC-LTI-01-E
Indoor Lighting	(Page 2 of 5)
Project Name: OSH Granada Hills	Date Prepared: 9/24/2014

5.	Complies ONLY if **Installed** ≤ **Allowed** ↕		Complies ONLY if **Installed** ≤ **Allowed**	↕
6.	**Allowed** Lighting Power Conditioned NRCC-LTI-03-E, page 1	43,949	**Allowed** Lighting Power Unconditioned NRCC-LTI-03-E, page 1	4,530

Declaration of Required Installation Certificates – Declare by selecting yes for all Installation Certificates that will be submitted. (Retain copies and verify forms are completed and signed.)

YES	NO	Form/Title	
		NRCI-LTI-01-E - Must be submitted for all buildings	☐ Field Inspector
		NRCI-LTI-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance.	☐ Field Inspector
		NRCI-LTI-03-E - Must be submitted for a line-voltage track lighting integral current limiter, or for a supplementary overcurrent protection panel used to energize only line-voltage track lighting, to be recognized for compliance.	☐ Field Inspector
		NRCI-LTI-04-E - Must be submitted for two interlocked systems serving an auditorium, a convention center, a conference room, a multipurpose room, or a theater to be recognized for compliance.	☐ Field Inspector
		NRCI-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF) to be recognized for compliance.	☐ Field Inspector
		NRCI-LTI-06-E - Must be submitted for additional wattage installed in a video conferencing studio to be recognized for compliance.	☐ Field Inspector

Declaration of Required Certificates of Acceptance – Declare by checking all of the Certificates of Acceptance that will be submitted. (Retain copies and verify forms are completed and signed.)

YES	NO	Form/Title	
		NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	☐ Field Inspector
		NRCA-LTI-03-A - Must be submitted for automatic daylight controls.	☐ Field Inspector
		NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	☐ Field Inspector

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STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 06/14)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE – USER INSTRUCTIONS	NRCC-LTI-01-E
Indoor Lighting	(Page 1 of 5)
Project Name: OSH Granada Hills	Date Prepared: 9/24/2014

Climate Zone: 9	Conditioned Floor Area : 38,023		
	Unconditioned Floor Area : 7,550		
General Information			
Building Type:	☑ Nonresidential	☐ High-Rise Residential	☐ Hotel/Motel
☐ Schools	☐ Relocatable Public Schools	☑ Conditioned Spaces	☑ Unconditioned Spaces
Phase of Construction:	☐ New Construction	☐ Addition	☑ Alteration
Method of Compliance:	☐ Complete Building	☑ Area Category	☐ Tailored

LIGHTING COMPLIANCE DOCUMENTS (select yes for each document included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance documents, refer to the Nonresidential Manual published by the California Energy Commission.

YES	NO	FORM	TITLE
YES		NRCC-LIT-01-E	Certificate of Compliance. All Pages required on plans for all submittals.
YES		NRCC-LIT-02-E	Lighting Controls, Certificate of Compliance, and PAF Calculation. All Pages required on plans for all submittals.
YES		NRCC-LIT-03-E	Indoor Lighting Power Allowance
YES		NRCC-LIT-04-E	Tailored Method Worksheets
	NO	NRCC-LIT-05-E	Line Voltage Track Lighting Worksheets

Summary of Allowed Lighting Power

Conditioned and Unconditioned space Lighting must not be combined for compliance

	Indoor Lighting Power for Conditioned Spaces			Indoor Lighting Power for Unconditioned Spaces		
			Watts			Watts
1.	**Installed** Lighting NRCC-LTI-01-E, page 4	+	31,076	**Installed** Lighting NRCC-LTI-01-E, page 4	+	4,530
2.	PORTABLE ONLY FOR OFFICES NRCC-LTI-01-E, page 3	+				
3.	Minus Lighting Control Credits NRCC-LTI-02-E, page 2	-	304	Minus Lighting Control Credits NRCC-LTI-02-E, page 2	-	0
4.	Adjusted **Installed** Lighting Power (row 1 plus row 2 minus row 3)	=	30,772	Adjusted **Installed** Lighting Power (row 1 minus row 3)	=	4,530

STATE OF CALIFORNIA
INDOOR LIGHTING – LIGHTING CONTROLS
CEC-NRCC-LTI-02-E (Revised 06/14)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-02-E
Indoor Lighting - Lighting Controls	(Page 1 of 3)
Project Name: OSH Granada Hills	Date Prepared: 9/24/2014

The NRCC-LTI-02-E shall be used to document all mandatory and prescriptive lighting controls that are applicable to the project.

Mandatory Lighting Control Declaration Statements (Indicate if the measure applies by checking yes or no below.)

YES	NO	Control Requirements
✓		Lighting shall be controlled by self-contained lighting control devices which are certified to the Energy Commission according to the Title 20 Appliance Efficiency Regulations in accordance with Section 110.9.
✓		Lighting shall be controlled by a lighting control a system or energy management control system in accordance with §110.9. An Installation Certificate shall be submitted in accordance with Section 130.4(b).
	✓	One or more Track Lighting Integral Current Limiters shall be installed which have been certified to the Energy Commission in accordance with §110.9 and §130.0. Additionally, an Installation Certificate shall be submitted in accordance with Section 130.4(b).
	✓	A Track Lighting Supplementary Overcurrent Protection Panel shall be installed in accordance with Section 110.9 and Section 130.0. Additionally, an Installation Certificate shall be installed in accordance with Section 130.4(b).
✓		All lighting controls and equipment shall comply with the applicable requirements in §110.9 and shall be installed in accordance with the manufacturer's instructions in accordance with Section 130.1.
✓		All luminaires shall be functionally controlled with manually switched ON and OFF lighting controls in accordance with Section 130.1(a).
✓		General lighting shall be separately controlled from all other lighting systems in an area. Floor and wall display, window display, case display, ornamental, and special effects lighting shall each be separately controlled on circuits that are 20 amps or less. When track lighting is used, general, display, ornamental, and special effects lighting shall each be separately controlled; in accordance with Section 130.1(a)4.
✓		The general lighting of any enclosed area 100 square feet or larger, with a connected lighting load that exceeds 0.5 watts per square foot shall meet the multi-level lighting control requirements in accordance with Section 130.1(b).
✓		All installed indoor lighting shall be equipped with controls that meet the applicable Shut-OFF control requirements in Section 130.1(c).
✓		Lighting in all Daylit Zones shall be controlled in accordance with the requirements in Section 130.1(d) and daylit zones are shown on the plans.
✓		Lighting power in buildings larger than 10,000 square feet shall be capable of being automatically reduced in response to a Demand Responsive Signal in accordance with Section 130.1(e).
✓		Before an occupancy permit is granted for a newly constructed building or area, or a new lighting system serving a building, area, or site is operated for normal use, indoor lighting controls serving the building, area, or site shall be certified as meeting the Acceptance Requirements for Code Compliance in accordance with Section 130.4.(a). The controls required to meet the Acceptance Requirements include automatic daylight controls, automatic shut-OFF controls, and demand responsive controls.

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 06/14)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE – USER INSTRUCTIONS	NRCC-LTI-01-E
Indoor Lighting	(Page 5 of 5)
Project Name: OSH Granada Hills	Date Prepared: 9/24/2014

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Documentation Author Signature:
Company: JP Engineering LLC	Signature Date: 9/24/2014
Address:	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: ,	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: James Solaro, PE CA #16851	Responsible Designer Signature:
Company : JP Engineering, LLC	Date Signed:
Address: 10597 Double R Blvd	License:
City/State/Zip: Reno, Nevada 89521	Phone: 775-852-2337

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 06/14)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE – USER INSTRUCTIONS	NRCC-LTI-01-E
Indoor Lighting	(Page 4 of 5)
Project Name: OSH Granada Hills	Date Prepared: 9/24/2014

A separate Lighting Schedule Must Be Filled Out for Conditioned and Unconditioned Spaces. Installed Lighting Power listed on this Lighting Schedule is only for:
☐ **CONDITIONED SPACE** ☑ **UNCONDITIONED SPACE**

C. INDOOR LIGHTING SCHEDULE and FIELD INSPECTION ENERGY CHECKLIST

Luminaire Schedule		Installed Watts					Location	Field Inspector [1]	
A	B	C	D		E	F	G	H	
			How wattage was determined						
Name or Item Tag	Complete Luminaire Description (i.e, 3 lamp fluorescent troffer, F32T8, one dimmable electronic ballast)	Watts per Luminaire	CEC Default from NA8	According to §130.0(c)	Number Luminaires	Total Installed Watts in this area (C x E)	Primary Function area in which these luminaires are installed	Pass	Fail
	Standard Allowance: 7550 sqft at 0.600 wall/s		☐	☐		4,530	Comp Bldg Com & Ind Storage	☐	☐
			☐	☐				☐	☐
			☐	☐				☐	☐
			☐	☐				☐	☐
			☐	☐				☐	☐
			☐	☐				☐	☐
			☐	☐				☐	☐
			☐	☐				☐	☐
			☐	☐				☐	☐
INSTALLED WATTS PAGE TOTAL:						4,530	Enter sum total of all pages into NRCC-LTI-01-E; Page 2		

STATE OF CALIFORNIA
INDOOR LIGHTING
CEC-NRCC-LTI-01-E (Revised 06/14)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE – USER INSTRUCTIONS	NRCC-LTI-01-E
Indoor Lighting	(Page 4 of 5)
Project Name: OSH Granada Hills	Date Prepared: 9/24/2014

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Luminaire Schedule		Installed Watts					Location	Field Inspector [1]	
A	B	C	D		E	F	G	H	
			How wattage was determined						
Name or Item Tag	Complete Luminaire Description (i.e, 3 lamp fluorescent troffer, F32T8, one dimmable electronic ballast)	Watts per Luminaire	CEC Default from NA8	According to §130.0(c)	Number Luminaires	Total Installed Watts in this area (C x E)	Primary Function area in which these luminaires are installed	Pass	Fail
F1	3 Lamp 4 ft T8 Rapid Start Elec	93.0	☑	☐	8	744	Office > 250 sqft	☐	☐
F1X	3 Lamp 4 ft T8 Rapid Start Elec	93.0	☑	☐	3	279	Office > 250 sqft	☐	☐
F2	4-Bar LED Elec	198.0	☑	☐	150	29,700	Retail Sales, Wholesale	☐	☐
F3	14w Twin Tube Elec	15.0	☑	☐	7	105	Retail Sales, Wholesale	☐	☐
F9	2 Lamp 4 ft T8 Rapid Start Elec	62.0	☑	☐	2	124	Office > 250 sqft	☐	☐
F9X	2 Lamp 4 ft T8 Rapid Start Elec	62.0	☑	☐	2	124	Office > 250 sqft	☐	☐
			☐	☐				☐	☐
			☐	☐				☐	☐
			☐	☐				☐	☐
INSTALLED WATTS PAGE TOTAL:						31,076	Enter sum total of all pages into NRCC-LTI-01-E; Page 2		

STATE OF CALIFORNIA
INDOOR LIGHTING – LIGHTING CONTROLS
CEC-NRCC-LTI-02-E (Revised 06/14)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-02-E
Indoor Lighting - Lighting Controls	(Page 3 of 3)
Project Name: OSH Granada Hills	Date Prepared: 9/24/2014

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Address:	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: ,	Phone:

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STATE OF CALIFORNIA
INDOOR LIGHTING – LIGHTING CONTROLS
CEC-NRCC-LTI-02-E (Revised 06/14)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-02-E
Indoor Lighting - Lighting Controls	(Page 2 of 3)
Project Name: OSH Granada Hills	Date Prepared: 9/24/2014

A separate document must be filled out for Conditioned and Unconditioned Spaces. This page is used only for the following:
☐ CONDITIONED SPACES ☑ UNCONDITIONED SPACES

MANDATORY AND PRESCRIPTIVE INDOOR LIGHTING CONTROL SCHEDULE, PAF CALCULATION, and FIELD INSPECTION CHECKLIST

Lighting Control Schedule			Standards Complying With [1] (✓ all that apply, or enter 'E' if Exempted)							PAF Credit Calculation [2]			✓ if Acceptance Test Required	Field Inspector	
										Watts of Controlled Lighting	PAF	Control Credit (K x L)			
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
Location in Building	Type/ Description of Lighting Control (i.e.: occupancy sensor, automatic time switch, dimmer, automatic daylight, etc…)	# of Units	§130.1(a)	§130.0(b)	§130.1(c)	§130.1(d)	§130.1(e)	§140.6(a)2	§140.6(d)					Pass	Fail
														☐	☐
														☐	☐
														☐	☐
														☐	☐
														☐	☐
														☐	☐
														☐	☐
Control Credit PAGE TOTAL (Sum of Column M):												0			
IF MULTIPLE PAGES ARE USED, ENTER SUM TOTAL OF Control Credit for all pages HERE (Sum of all Column M):												0			
												Enter Control Credit total into NRCC-LTI-01-E; Page 1.			

1. §130.1(a) = Manual area controls; §130.0(b) = Multi Level; §130.1(c) = Auto Shut-Off; §130.1(d) = Mandatory Daylight; §130.1(e) = Demand Responsive; §140.6(d) = Additional lighting controls installed to earn a PAF; §140.6(d) = Prescriptive Secondary Sidelit Daylight Controls.
2. Check Table 140.6-A for correct Factor. PAFs shall not be traded between conditioned and unconditioned spaces. As a condition to earn a PAF, an Installation Certificate is also required to be filled out, signed, and submitted.

STATE OF CALIFORNIA
INDOOR LIGHTING – LIGHTING CONTROLS
CEC-NRCC-LTI-02-E (Revised 06/14)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-02-E
Indoor Lighting - Lighting Controls	(Page 2 of 3)
Project Name: OSH Granada Hills	Date Prepared: 9/24/2014

A separate document must be filled out for Conditioned and Unconditioned Spaces. This page is used only for the following:
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MANDATORY AND PRESCRIPTIVE INDOOR LIGHTING CONTROL SCHEDULE, PAF CALCULATION, and FIELD INSPECTION CHECKLIST

Lighting Control Schedule			Standards Complying With [1] (✓ all that apply, or enter 'E' if Exempted)							PAF Credit Calculation [2]			✓ if Acceptance Test Required	Field Inspector	
										Watts of Controlled Lighting	PAF	Control Credit (K x L)			
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
Location in Building	Type/ Description of Lighting Control (i.e.: occupancy sensor, automatic time switch, dimmer, automatic daylight, etc…)	# of Units	§130.1(a)	§130.0(b)	§130.1(c)	§130.1(d)	§130.1(e)	§140.6(a)2	§140.6(d)					Pass	Fail
(E) Office & Support	Occ Sensor - <= 125 sqft							✓		124	0.40	50	✓	☐	☐
														☐	☐
														☐	☐
														☐	☐
														☐	☐
														☐	☐
														☐	☐
Control Credit PAGE TOTAL (Sum of Column M):												50			
IF MULTIPLE PAGES ARE USED, ENTER SUM TOTAL OF Control Credit for all pages HERE (Sum of all Column M):												304			
												Enter Control Credit total into NRCC-LTI-01-E; Page 1.			

1. §130.1(a) = Manual area controls; §130.0(b) = Multi Level; §130.1(c) = Auto Shut-Off; §130.1(d) = Mandatory Daylight; §130.1(e) = Demand Responsive; §140.6(d) = Additional lighting controls installed to earn a PAF; §140.6(d) = Prescriptive Secondary Sidelit Daylight Controls.
2. Check Table 140.6-A for correct Factor. PAFs shall not be traded between conditioned and unconditioned spaces. As a condition to earn a PAF, an Installation Certificate is also required to be filled out, signed, and submitted.

STATE OF CALIFORNIA
INDOOR LIGHTING – LIGHTING CONTROLS
CEC-NRCC-LTI-02-E (Revised 06/14)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-02-E
Indoor Lighting - Lighting Controls	(Page 2 of 3)
Project Name: OSH Granada Hills	Date Prepared: 9/24/2014

A separate document must be filled out for Conditioned and Unconditioned Spaces. This page is used only for the following:
☑ CONDITIONED SPACES ☐ UNCONDITIONED SPACES

MANDATORY AND PRESCRIPTIVE INDOOR LIGHTING CONTROL SCHEDULE, PAF CALCULATION, and FIELD INSPECTION CHECKLIST

Lighting Control Schedule			Standards Complying With [1] (✓ all that apply, or enter 'E' if Exempted)							PAF Credit Calculation [2]			✓ if Acceptance Test Required	Field Inspector	
										Watts of Controlled Lighting	PAF	Control Credit (K x L)			
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
Location in Building	Type/ Description of Lighting Control (i.e.: occupancy sensor, automatic time switch, dimmer, automatic daylight, etc…)	# of Units	§130.1(a)	§130.0(b)	§130.1(c)	§130.1(d)	§130.1(e)	§140.6(a)2	§140.6(d)					Pass	Fail
Sales Floor	Dimming - Multiscene							✓		16,434	0.20	3,287	✓	☐	☐
Sales Floor	Dimming - Multiscene									105	0.20	21		☐	☐
Sales Floor	Dimming - Multiscene									7,524	0.20	1,505		☐	☐
Sales Floor	Dimming - Multiscene									5,742	0.20	1,148		☐	☐
(E) Office & Support	Occ Sensor - Partial On									744	0.20	149		☐	☐
(E) Office & Support	Occ Sensor - Partial On									279	0.20	56		☐	☐
(E) Office & Support	Occ Sensor - <= 125 sqft									124	0.40	50		☐	☐
Control Credit PAGE TOTAL (Sum of Column M):												6,215			
IF MULTIPLE PAGES ARE USED, ENTER SUM TOTAL OF Control Credit for all pages HERE (Sum of all Column M):												304			
												Enter Control Credit total into NRCC-LTI-01-E; Page 1.			

1. §130.1(a) = Manual area controls; §130.0(b) = Multi Level; §130.1(c) = Auto Shut-Off; §130.1(d) = Mandatory Daylight; §130.1(e) = Demand Responsive; §140.6(d) = Additional lighting controls installed to earn a PAF; §140.6(d) = Prescriptive Secondary Sidelit Daylight Controls.
2. Check Table 140.6-A for correct Factor. PAFs shall not be traded between conditioned and unconditioned spaces. As a condition to earn a PAF, an Installation Certificate is also required to be filled out, signed, and submitted.

JP #14128

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BID DOCUMENTS
9/24/14

Orchard SUPPLY HARDWARE est. 1931

18060 CHATSWORTH STREET
GRANADA HILLS, CALIFORNIA

TITLE 24 CALCULATIONS

	DATE	REMARKS
1	09/25/2014	BUILDING DEPARTMENT SUBMITTAL
2	11/03/2014	BID SET

PM/ENG:	RP/JS
DRAWN BY:	RP
JOB NO.:	SNR14–0037–00

SHEET
E0.7

11/03/2014 BID SET

STATE OF CALIFORNIA

INDOOR LIGHTING POWER ALLOWANCE

CEC-NRCC-LTI-03-E (Revised 06/14) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-LTI-03-E
Certificate of Compliance - Indoor Lighting Power Allowance (Page 2 of 4)
Project Name: OSH Granada Hills Date Prepared: 9/24/2014

A separate page must be filled out for Conditioned and Unconditioned Spaces. This page is only for:
☐ CONDITIONED spaces ☑ UNCONDITIONED spaces

C -2 AREA CATEGORY METHOD GENERAL LIGHTING POWER ALLOWANCE

☐ Do not include portable lighting for offices. Portable lighting for offices shall be documented only in section B of NRCC-LTI-01-E.
☐ Separately list lighting for each primary function area as defined in §100.1 of the Standards.

A		B		C		D
AREA CATEGORY (From §140.6 Table 140.6-C)		WATTS				ALLOWED
Location in Building	Primary Function Area per Table 140.6-C	PER (ft^2)	X	AREA (ft^2)	=	WATTS
Unconditioned	Comp Bldg Com & Ind Storage	0.60		7,550		4,530
		TOTALS		7,550		

Enter sum total Area Category allowed watts into section C-1 of NRCC-LTI-03-E (this compliance form) 4,530
WATTS

STATE OF CALIFORNIA

INDOOR LIGHTING POWER ALLOWANCE

CEC-NRCC-LTI-03-E (Revised 06/14) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-LTI-03-E
Certificate of Compliance - Indoor Lighting Power Allowance (Page 1 of 4)
Project Name: OSH Granada Hills Date Prepared: 9/24/2014

ALLOWED LIGHTING POWER

A separate page must be filled out for Conditioned and Unconditioned Spaces. This page is only for:
☐ CONDITIONED spaces ☑ UNCONDITIONED spaces

A. SUMMARY TOTALS OF LIGHTING POWER ALLOWANCES

☐ If using Complete Building Method for compliance, use only the total in column (a) as total allowed building watts.
☐ If using Area Category Method, Tailored Method, or a combination of Area Category and Tailored Method for compliance, use only the total in column (b) as the total allowed building watts

	(a)	(b)
1. Complete Building Method Allowed Watts. Documented in section B of NRCC-LTI-03-E (below on this page)		
2. Area Category Method Allowed Watts. Documented in section C-1 of NRCC-LTI-03-E (below on this page)		4,530
3. Tailored Method Allowed Watts. Documented in section A of NRCC-LTI-04-E		0
TOTAL ALLOWED BUILDING WATTS. Enter number into correct cell on NRCC-LTI-01, Page 2, Row 1		4,530

☑ Check here if building contains both conditioned and unconditioned areas.

B. COMPLETE BUILDING METHOD LIGHTING POWER ALLOWANCE

A	B		C		D
TYPE OF BUILDING (From §140.6 Table 140.6-B)	WATTS PER (ft^2)	X	COMPLETE BLDG. AREA	=	ALLOWED WATTS
	Total Area:				
Total Watts. Enter Total Watts into section A, row 1 (Above on this page)					

C -1 AREA CATEGORY METHOD TOTAL LIGHTING POWER ALLOWANCES (C-2 plus C-3)	Watts
Total from section C-2 .	4,530
Total from section C-3 .	0
Total Watts. Enter Total Watts into section A, row 2 (Above on this page) .	4,530

STATE OF CALIFORNIA

INDOOR LIGHTING POWER ALLOWANCE

CEC-NRCC-LTI-03-E (Revised 06/14) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-LTI-03-E
Certificate of Compliance - Indoor Lighting Power Allowance (Page 2 of 4)
Project Name: OSH Granada Hills Date Prepared: 9/24/2014

A separate page must be filled out for Conditioned and Unconditioned Spaces. This page is only for:
☑ CONDITIONED spaces ☐ UNCONDITIONED spaces

C -2 AREA CATEGORY METHOD GENERAL LIGHTING POWER ALLOWANCE

☐ Do not include portable lighting for offices. Portable lighting for offices shall be documented only in section B of NRCC-LTI-01-E.
☐ Separately list lighting for each primary function area as defined in §100.1 of the Standards.

A		B		C		D
AREA CATEGORY (From §140.6 Table 140.6-C)		WATTS				ALLOWED
Location in Building	Primary Function Area per Table 140.6-C	PER (ft^2)	X	AREA (ft^2)	=	WATTS
Sales Floor	Retail Sales, Wholesale	1.20		17,531		21,037
Sales Floor	Retail Sales, Wholesale	1.20		9,369		11,243
Sales Floor	Retail Sales, Wholesale	1.20		7,392		8,870
Office	Office > 250 sqft	0.75		3,731		2,798
		TOTALS		38,023		

Enter sum total Area Category allowed watts into section C-1 of NRCC-LTI-03-E (this compliance form) 43,949
WATTS

STATE OF CALIFORNIA

INDOOR LIGHTING POWER ALLOWANCE

CEC-NRCC-LTI-03-E (Revised 06/14) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-LTI-03-E
Certificate of Compliance - Indoor Lighting Power Allowance (Page 1 of 4)
Project Name: OSH Granada Hills Date Prepared: 9/24/2014

ALLOWED LIGHTING POWER

A separate page must be filled out for Conditioned and Unconditioned Spaces. This page is only for:
☑ CONDITIONED spaces ☐ UNCONDITIONED spaces

A. SUMMARY TOTALS OF LIGHTING POWER ALLOWANCES

☐ If using Complete Building Method for compliance, use only the total in column (a) as total allowed building watts.
☐ If using Area Category Method, Tailored Method, or a combination of Area Category and Tailored Method for compliance, use only the total in column (b) as the total allowed building watts

	(a)	(b)
1. Complete Building Method Allowed Watts. Documented in section B of NRCC-LTI-03-E (below on this page)		
2. Area Category Method Allowed Watts. Documented in section C-1 of NRCC-LTI-03-E (below on this page)		43,949
3. Tailored Method Allowed Watts. Documented in section A of NRCC-LTI-04-E		0
TOTAL ALLOWED BUILDING WATTS. Enter number into correct cell on NRCC-LTI-01, Page 2, Row 1		43,949

☑ Check here if building contains both conditioned and unconditioned areas.

B. COMPLETE BUILDING METHOD LIGHTING POWER ALLOWANCE

A	B		C		D
TYPE OF BUILDING (From §140.6 Table 140.6-B)	WATTS PER (ft^2)	X	COMPLETE BLDG. AREA	=	ALLOWED WATTS
	Total Area:				
Total Watts. Enter Total Watts into section A, row 1 (Above on this page)					

C -1 AREA CATEGORY METHOD TOTAL LIGHTING POWER ALLOWANCES (C-2 plus C-3)	Watts
Total from section C-2 .	43,949
Total from section C-3 .	0
Total Watts. Enter Total Watts into section A, row 2 (Above on this page) .	43,949

STATE OF CALIFORNIA

OUTDOOR LIGHTING

CEC-NRCC-LTO-01-E (Revised 06/14) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-LTO-01-E
Outdoor Lighting (Page 2 of 4)
Project Name: OSH Granada Hills Date Prepared: 9/24/2014

Schedule of luminaires exempt from the outdoor lighting power requirements in §140.7	
Name or Symbol	Description of exempt luminaire in accordance with the exemptions

Schedule of luminaires exempt from the cutoff requirements in §130.2(b)	
Name or Symbol	Description of exempt luminaire in accordance with the exemptions

Schedule of luminaires exempt from the outdoor lighting control requirements in §130.2(c)	
Name or Symbol	Description of exempt luminaire in accordance with the exemptions

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STATE OF CALIFORNIA

OUTDOOR LIGHTING

CEC-NRCC-LTO-01-E (Revised 06/14) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-LTO-01-E
Outdoor Lighting (Page 1 of 4)
Project Name: OSH Granada Hills Date Prepared: 9/24/2014

Project Address: 18060 Chatsworth Street Granada Hills, CA 91344
Total Illuminated Hardscape Area: 0

General Information
Phase of Construction: ☐ New Construction ☐ Addition ☑ Alteration
Outdoor Lighting Zone (OLZ) ☐ OLZ-1 ☐ OLZ-2 ☑ OLZ-3 ☐ OLZ-4
I have confirmed with the AHJ which OLZ applies to this site. For default lighting zone designations, see Title 24 Part 6, §10-114

LIGHTING COMPLIANCE DOCUMENTS (check box for each document included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance documents, refer to the Nonresidential Manual published by the California Energy Commission.

☑	NRCC-LTO-01-E	Certificate of Compliance
☐	NRCC-LTO-02-E	Outdoor Lighting Controls Certificate of Compliance
☐	NRCC-LTO-03-E	Outdoor Lighting Power Allowance Certificate of Compliance

	Summary of Allowed Outdoor Lighting Power		Watts
1.	**Sum Total ALLOWED** Outdoor Lighting Wattage from NRCC-LTO-03-E, page 1	=	4,985
	Complies ONLY if **Installed ≤ Allowed**		↕
2.	**Sum Total INSTALLED** Outdoor lighting Wattage from NRCC-LTO-01-E, page 3		4,985

Declaration of Required Installation Certificates – Declare by checking all Installation Certificates that will be submitted. (Retain copies and verify forms are completed and signed.)

☑ NRCI-LTO-01-E - Must be submitted for all buildings ☐ Field Inspector
☑ NRCI-LTO-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance. ☐ Field Inspector

Declaration of Required Certificates of Acceptance – Declare by checking all of the Certificates of Acceptance that will be submitted. (Retain copies and verify forms are completed and signed.)

☑ NRCA-LTO-02-A - Must be submitted for outdoor lighting controls. ☐ Field Inspector

---

CERTIFICATE OF COMPLIANCE – USER INSTRUCTIONS NRCC-LTI-04-E
Indoor Lighting – Tailored Method (Page **7** of 7)

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Documentation Author Signature:
Company: JP Engineering LLC	Signature Date: 9/24/2014
Address:	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: ,	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: James Solaro, PE CA #16851	Responsible Designer Signature:
Company : JP Engineering, LLC	Date Signed:
Address: 10597 Double R Blvd	License:
City/State/Zip: Reno, Nevada 89521	Phone: 775-852-2337

STATE OF CALIFORNIA

INDOOR LIGHTING POWER ALLOWANCE

CEC-NRCC-LTI-03-E (Revised 06/14) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-LTI-03-E
Certificate of Compliance - Indoor Lighting Power Allowance (Page 4 of 4)
Project Name: OSH Granada Hills Date Prepared: 9/24/2014

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Documentation Author Signature:
Company: JP Engineering LLC	Signature Date: 9/24/2014
Address:	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: ,	Phone:

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Responsible Designer Name: James Solaro, PE CA #16851	Responsible Designer Signature:
Company : JP Engineering, LLC	Date Signed:
Address: 10597 Double R Blvd	License:
City/State/Zip: Reno, Nevada 89521	Phone: 775-852-2337

STATE OF CALIFORNIA

OUTDOOR LIGHTING CONTROLS

CEC-NRCC-LTO-02-E (Revised 06/14) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-LTO-02-E
Outdoor Lighting Controls (Page 2 of 3)
Project Name: OSH Granada Hills Date Prepared: 9/24/2014

MANDATORY OUTDOOR LIGHTING CONTROL SCHEDULE and FIELD INSPECTION CHECKLIST

Outdoor Lighting Control Schedule			Standards Complying With [1] (✓ all that apply, or enter 'E' if Exempted)						✓ if Acceptance Test Required	Field Inspector	
A	B	C	D	E	F	G	H	I	N	O	
Location and Application of Luminaires being controlled	Type/ Description of Lighting Control (i.e. motion sensor, photocontrol, outdoor astronomical time-switch control, centralized time-based zone lighting control)	# of Units	§130.2(a)	§130.2(c)1	§130.2(c)2	§130.2(c)3	§130.2(c)4	§130.2(c)5		Pass	Fail
										☐	☐
										☐	☐
										☐	☐
										☐	☐
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STATE OF CALIFORNIA

OUTDOOR LIGHTING CONTROLS

CEC-NRCC-LTO-02-E (Revised 06/14) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-LTO-02-E
Outdoor Lighting Controls (Page 1 of 3)
Project Name: OSH Granada Hills Date Prepared: 9/24/2014

The NRCC-LTO-02-E shall be used to document all mandatory outdoor lighting controls that are applicable to the project.

Mandatory Outdoor Lighting Control Declaration Statements

Check all that apply:

☐ Lighting shall be controlled by self-contained lighting control devices which are certified to the Energy Commission according to the Title 20 Appliance Efficiency Regulations in accordance with §110.9.
☑ Lighting shall be controlled by a lighting control system or energy management control system in accordance with §110.9. An Installation Certificate shall be submitted in accordance with §130.4(b).
☑ All lighting controls and equipment shall comply with the applicable requirements in §110.9 and shall be installed in accordance with the manufacturer's instructions in accordance with §130.1
☑ Part-Night Outdoor Lighting Controls, as defined in Section 100.1, shall meet the requirements in Section 110.9(b)5
☑ All outdoor incandescent luminaires rated over 100 watts, determined in accordance with Section 130.0(c), shall be controlled by a motion sensor.
☑ All outdoor luminaires rated for use with lamps greater than 150 lamp watts, determined in accordance with Section 130.0(c), shall comply with Backlight, Uplight, and Glare (collectively referred to as "BUG") in accordance with Section 130.2(b)
☑ All installed outdoor lighting shall be controlled by a photocontrol or outdoor astronomical time-switch control in accordance with Section 130.2(c)1
☑ All installed outdoor lighting shall be circuited and independently controlled from other electrical loads by an automatic scheduling control in accordance with Section 130.2(c)2
☑ All installed outdoor lighting, where the bottom of the luminaire is mounted 24 feet or less above the ground, shall be controlled with automatic lighting controls in accordance with Section 130.2(c)3
☑ For Outdoor Sales Frontage, Outdoor Sales Lots, and Outdoor Sales Canopies lighting, an automatic lighting control in accordance with Section 130.2(c)4
☑ For Building Facade, Ornamental Hardscape and Outdoor Dining lighting, an automatic lighting control in accordance with Section 130.2(c)5
☑ Before an occupancy permit is granted for a newly constructed building or area, or a new lighting system serving a building, area, or site is operated for normal use, indoor lighting controls serving the building, area, or site shall be certified as meeting the Acceptance Requirements for Code Compliance in accordance with §130.4.(a). Outdoor lighting controls shall comply with the applicable requirements of Section 130.2(c) and Reference Nonresidential Appendix NA7.8

STATE OF CALIFORNIA

OUTDOOR LIGHTING

CEC-NRCC-LTO-01-E (Revised 06/14) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-LTO-01-E
Outdoor Lighting (Page 4 of 4)
Project Name: OSH Granada Hills Date Prepared: 9/24/2014

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Documentation Author Signature:
Company: JP Engineering LLC	Signature Date: 9/24/2014
Address:	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: ,	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: James Solaro, PE CA #16851	Responsible Designer Signature:
Company : JP Engineering, LLC	Date Signed:
Address: 10597 Double R Blvd	License:
City/State/Zip: Reno, Nevada 89521	Phone: 775-852-2337

STATE OF CALIFORNIA

OUTDOOR LIGHTING

CEC-NRCC-LTO-01-E (Revised 06/14) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-LTO-01-E
Outdoor Lighting (Page 3 of 4)
Project Name: OSH Granada Hills Date Prepared: 9/24/2014

A. OUTDOOR LIGHTING SCHEDULE and FIELD INSPECTION ENERGY CHECKLIST

Luminaire Schedule		Installed Watts					Location	Cutoff	Field Inspector	
A	B	C	D		E	F	G	H	I	
			How wattage was determined							
Name or Item Tag	Complete Luminaire Description	Watts per Luminaire	CEC Default from NA8	According to §130.0(c)	Number of Luminaires	Total Installed Watts in this area (C x E)	Primary Function area in which these luminaires are installed	BUG Rating	Pass	Fail
F4	4 Lamp 4 ft T8 Rapid Start Elec	114.0	☑	☐	16	1,824	Sales Canopy		☐	☐
L1	2-Driver LED Elec	57.0	☑	☐	9	513	Sales Canopy		☐	☐
L2	4-Driver LED Elec	79.0	☑	☐	32	2,528	Sales Canopy		☐	☐
A1	40w Incandescent	40.0	☑	☐	3	120	Building Facade		☐	☐
			☐	☐					☐	☐
			☐	☐					☐	☐
			☐	☐					☐	☐
			☐	☐					☐	☐
			☐	☐					☐	☐
			☐	☐					☐	☐
			☐	☐					☐	☐
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			☐	☐					☐	☐
			☐	☐					☐	☐
			☐	☐					☐	☐
			☐	☐					☐	☐
			☐	☐					☐	☐
			☐	☐					☐	☐
					INSTALLED WATTS PAGE TOTAL:	4,985	Enter sum total of all pages (**Sum Total INSTALLED** Outdoor lighting wattage) into NRCC-LTO-01-E; Page 1		4,985	

JP #14128

JP ENGINEERING

10597 Double R Blvd.
Reno, Nevada 89521
P: 775.852.2337
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THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY AND COPYRIGHT OF JP ENGINEERING, LLC AND SHALL NOT BE USED ON ANY OTHER WORK EXCEPT BY AGREEMENT WITH JP ENGINEERING, LLC. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS AND SHALL BE VERIFIED ON THE JOB SITE. ANY DISCREPANCY SHALL BE BROUGHT TO THE NOTICE OF JP ENGINEERING, LLC PRIOR TO THE COMMENCEMENT OF ANY WORK.

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f 310.481.9835

BID DOCUMENTS
9/24/14

Orchard est. 1931 SUPPLY HARDWARE™

18060 CHATSWORTH STREET
GRANADA HILLS, CALIFORNIA

TITLE 24 CALCULATIONS

	DATE	REMARKS
1	09/25/2014	BUILDING DEPARTMENT SUBMITTAL
2	11/03/2014	BID SET

PM/ENG:	RP/JS
DRAWN BY:	RP
JOB NO.:	SNR14-0037-00

SHEET
E0.7A

11/03/2014 BID SET

STATE OF CALIFORNIA

OUTDOOR LIGHTING POWER ALLOWANCES

CEC-NRCC-LTO-03-E (Revised 06/14) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-03-E
Outdoor Lighting Power Allowances	(Page 4 of 4)
Project Name: OSH Granada Hills	Date Prepared: 9/24/2014

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Documentation Author Signature:
Company: JP Engineering LLC	Signature Date: 9/24/2014
Address:	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: ,	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: James Solaro, PE CA #16851	Responsible Designer Signature:
Company : JP Engineering, LLC	Date Signed:
Address: 10597 Double R Blvd	License:
City/State/Zip: Reno, Nevada 89521	Phone: 775-852-2337

STATE OF CALIFORNIA

OUTDOOR LIGHTING POWER ALLOWANCES

CEC-NRCC-LTO-03-E (Revised 06/14) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-03-E
Outdoor Lighting Power Allowances	(Page 3 of 4)
Project Name: OSH Granada Hills	Date Prepared: 9/24/2014

C-3. WATTAGE ALLOWANCE PER SQUARE FOOT OF HARDSCAPE AREA (Ornamental Lighting) – Table 140.7-B

☐ Allowance for the total site illuminated hardscape area. Luminaires qualifying for this allowance shall be rated for 100 watts or less as determined in accordance with Section 130.0(c), and shall be post-top luminaires, lanterns, pendant luminaires, or chandeliers.

☐ If more than one luminaire type is used per location, use multiple rows for that location

A	B	C	D	E	F	G	H	I	J
	ALLOTTED WATTS			DESIGN WATTS					
Name of area for which ornamental allowance is claimed	Square feet of Hardscape	Wattage Allowance per square foot	Allotted Watts (B x C)	Luminaire Code or Symbol	Luminaire Description	Luminaire Quantity	Watts per luminaire	Design Watts (G x H)	Allowed Watts (smaller of D or I)
								Sum total allowance for ornamental lighting on the site:.	0

C-4. WATTAGE ALLOWANCE PER SQUARE FOOT OF SPECIFIC AREA - Table 140.7-B

☐ Allowances for Building Facades; Outdoor Sales Lots; Vehicle Service Station Hardscape; Vehicle Service Station Canopies; Sales Canopies; Non-sales Canopies; Guard Stations; Student Pick-up/Drop-off zone: Outdoor Dining; Special Security Lighting for Retail Parking and Pedestrian Hardscape.

☐ If more than one luminaire type is used per location, use multiple rows for that location

A	B	C	D	E	F	G	H	I	J
	ALLOTTED WATTS			DESIGN WATTS					
Name of Location for which allowance is claimed	Illuminated Area of Application	Wattage Allowance per square foot	Allotted Watts (B x C)	Luminaire Code or Symbol	Luminaire Description	Luminaire Quantity	Watts per luminaire	Design Watts (G x H)	Allowed Watts (smaller of D or I)
Exterior Garden Ce	8,137	0.908	7,388	F4	4 Lamp 4 ft T8 Rapid Start E	13	114.0	1,482	4,865
				F4X	4 Lamp 4 ft T8 Rapid Start E	3	114.0	342	
				L1	2-Driver LED Elec	9	57.0	513	
				L2	4-Driver LED Elec	32	79.0	2,528	
Building Facade	925	0.350	324	A1	40w Incandescent	3	40.0	120	120
								Sum total allowance for specific area on the site:	4,985

STATE OF CALIFORNIA

OUTDOOR LIGHTING CONTROLS

CEC-NRCC-LTO-02-E (Revised 06/14) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-02-E
Outdoor Lighting Controls	(Page 3 of 3)
Project Name: OSH Granada Hills	Date Prepared: 9/24/2014

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Documentation Author Signature:
Company: JP Engineering LLC	Signature Date: 9/24/2014
Address:	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: ,	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

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Responsible Designer Name: James Solaro, PE CA #16851	Responsible Designer Signature:
Company : JP Engineering, LLC	Date Signed:
Address: 10597 Double R Blvd	License:
City/State/Zip: Reno, Nevada 89521	Phone: 775-852-2337

STATE OF CALIFORNIA

SIGN LIGHTING

CEC-NRCC-LTS-01-E(Revised 06/14) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTS-01-E
Sign Lighting	(Page 5 of 5)
Project Name: OSH Granada Hills	Date Prepared: 9/24/2014

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

- I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Documentation Author Signature:
Company: JP Engineering LLC	Signature Date: 9/24/2014
Address:	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: ,	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

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3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
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Responsible Designer Name: James Solaro, PE CA #16851	Responsible Designer Signature:
Company : JP Engineering, LLC	Date Signed:
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STATE OF CALIFORNIA

SIGN LIGHTING

CEC-NRCC-LTS-01-E(Revised 06/14) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTS-01-E
Sign Lighting	(Page 3 of 5)
Project Name: OSH Granada Hills	Date Prepared: 9/24/2014

2. Maximum Allowed Lighting Power Method of Compliance

Certificate of Compliance and Field Inspection Energy Checklist

Complete this part if there are signs using the maximum allowed lighting power method of compliance. (Complete part 3 of this Certificate of Compliance if there are signs using the Specific lighting sources method of compliance)

A	B	C	D	E	F	G	H	I	J
Symbol Or Code	Description of the Sign	OPTIONAL – Energy Verified Label (see instructions below)	Allotted Watts				Design Watts	Complies Y/N	Filed Inspector Check that sign complies
		✓	Sign Area (ft²)	Internally (I) or Externally (E) Illuminated	Allowed LPD (I – 12 W/ft²) (E = 2.3 W/ft²)	Allowed Watts (D x F)	Total installed watts for sign	Complies if H ≤ G	✓
S1	Main Building Sign	☐	240	Int	12.0	2,880	342	Y	☐
S2	Secondary Building S	☐	85	Int	12.0	1,020	114	Y	☐
		☐							☐
		☐							☐
		☐							☐
		☐							☐
		☐							☐
		☐							☐
		☐							☐
		☐							☐
		☐							☐
		☐							☐

A	Symbol or code used on the plans (when plans are required) and other documents.
B	A description of the sign, or location of sign on the building; and the location of sign on construction documents.
C	OPTIONAL - Check this box only if this sign has a permanent, pre-printed, factory-installed, ENERGY VERIFIED label, confirming that the sign complies with the Section 140.8 of the California 2013 Title 24, Part 6 Standards, using the Maximum Allowed Lighting Power method of compliance. The only labels that will be recognized for this purpose are ENERGY VERIFIED Certification Marks authorized by Underwriters Laboratories (UL) or other Product Certification Body accredited to ISO/IEC Guide 65 by the American National Standards Institute in accordance with ISO/IEC 17011. Surveillance by the Accredited Certification Body shall be an ongoing annual inspection program carried out by a Type A Inspection body in accordance with ISO/IEC 17020. For signs with such an ENERGY VERIFIED label, columns 'D' through 'I' are not required to be filled out. Note: Using an ENERGY VERIFIED label is an optional method to validate compliance. An ENERGY VERIFIED label is not needed for compliance.
D	The sign area in square feet.
E	List "I" if the sign is internally illuminated. List "E" if the sign is externally illuminated.
F	Allowed watts per square foot. Enter 12 if the sign is listed as "I" in column E. Enter 2.3 if sign is listed as "E" in column E.
G	Multiply the square footage in column D times the allowed Lighting Power Density (LPD = watts) in column F.
H	Show the total installed watts in the sign, as determined according to the applicable provisions of §130(c).
I	Enter Y if the number in column H is less than or equal to the number in column G. Otherwise, the sign does not comply.
J	This page doubles as a field inspection checklist.

Field Inspector Notes:

STATE OF CALIFORNIA

SIGN LIGHTING

CEC-NRCC-LTS-01-E(Revised 06/14) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTS-01-E
Sign Lighting	(Page 2 of 5)
Project Name: OSH Granada Hills	Date Prepared: 9/24/2014

1b. Mandatory Sign Lighting Controls

If the person signing the Certificate of Compliance Declaration Statement on this NRCC-LTS-01-E is responsible for complying with the sign lighting control requirements, that person shall answer all of the following questions:

If there are construction documents, indicate where on the building plans the mandatory measures (sign lighting control) note block can be located:

1	**§130.3(a)1.** All **indoor sign lighting** is controlled with an automatic time-switch control or astronomical time-switch control.	Y ☐	N ☐	NA ☐
2	**§130.3(a)2A.** All **outdoor sign lighting** is controlled with a photocontrol in addition to an automatic time-switch control, or an astronomical time-switch control.	Y ☐	N ☐	NA ☐
	EXCEPTION to Section 130.3(a)2A: Outdoor signs in tunnels, and signs in large permanently covered outdoor areas that are intended to be continuously lit, 24 hours per day and 365 days per year.	Y ☐		NA ☐
3	**§130.3(a)2B.** All **outdoor sign lighting** that is ON both day and night is controlled with a dimmer that provides the ability to automatically reduce sign lighting power by a minimum of 65 percent during nighttime hours. Signs that are illuminated at night and for more than 1 hour during daylight hours shall be considered ON both day and night.	Y ☐	N ☐	NA ☐
	EXCEPTION to Section 130.3(a)2B: Outdoor signs in tunnels and large covered areas that are intended to be illuminated both day and night.	Y ☐		NA ☐
4	**§130.3(a)3. Demand Responsive Electronic Message Center Control**. An Electronic Message Center (EMC) having a new connected lighting power load greater than 15 kW has a control installed that is capable of reducing the lighting power by a minimum of 30 percent when receiving a demand response signal.	Y ☐	N ☐	N/A ☐
	EXCEPTION to Section 130.3(a)3: Lighting for EMCs that is not permitted by a health or life safety statute, ordinance, or regulation to be reduced by 30 percent.	Y ☐		NA ☐

Field Inspector Notes:

STATE OF CALIFORNIA

SIGN LIGHTING

CEC-NRCC-LTS-01-E(Revised 06/14) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTS-01-E
Sign Lighting	(Page 1 of 5)
Project Name: OSH Granada Hills	Date Prepared: 9/24/2014

Project Address:
18060 Chatsworth Street Granada Hills, CA 91344

Location of Sign	☑ Outdoor Signs	☐ Indoor Signs	
Phase of Sign Construction	☐ New Signs	☑ Sign Alterations	
Type of Lighting Control	☐ New Lighting Controls	☑ Replaced Lighting Controls	☐ Not Installing Lighting Controls

This Certificate of Compliance includes the following components (check all that apply)
☑ Mandatory Measures (Lighting Controls) ☑ Maximum Allowed Lighting Power ☐ Specific Lighting Sources

1. Mandatory Sign Lighting Controls

NOTES:

1. *The same responsible person may install both the sign lighting power and the sign lighting controls, or a different responsible person may install the sign lighting controls than the responsible person installing the sign lighting power.*
2. *The Mandatory Measures (sign lighting controls) are required for compliance with the sign lighting Standards. If the person responsible for installing the sign lighting power is not also responsible for the sign lighting controls, then the owner of the sign, general contractor, or architect shall be responsible to have the sign lighting controls installed.*
3. *If more than one person has responsibility for compliance, each responsible person shall prepare and sign a Certificate of Compliance and an Installation Certificate applicable to the portion of construction for which they are responsible; alternatively, the person with chief responsibility for construction shall prepare and sign the Certificate of Compliance Declaration Statement for the entire construction.*

1a. Statements of Responsibility: Any person signing the Certificate of Compliance Declaration Statement on this NRCC-LTS-01-E shall complete Part 1a. Check Yes or No for all of the following statements:

1	I have responsibility for installing the sign lighting controls ☐ Yes, complete parts 1a and 1b of this form ☐ No, complete part 1a of this form
2	There are no existing sign lighting controls and I will be installing compliant sign lighting controls ☑ Yes ☐ No
3	There are no existing sign lighting controls and someone else will be responsible to install compliant sign lighting controls ☑ Yes ☐ No
4	There are existing sign lighting controls that do not comply with the applicable provision of §110.9 and §130.3 and I will be installing compliant sign lighting controls ☑ Yes ☐ No
5	There are existing sign lighting controls that do not comply with the applicable provision of §110.9 and §130.3 and someone else will be responsible to install compliant sign lighting controls ☑ Yes ☐ No

---

JP #14128

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Reno, Nevada 89521
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BID DOCUMENTS
9/24/14

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18060 CHATSWORTH STREET
GRANADA HILLS, CALIFORNIA

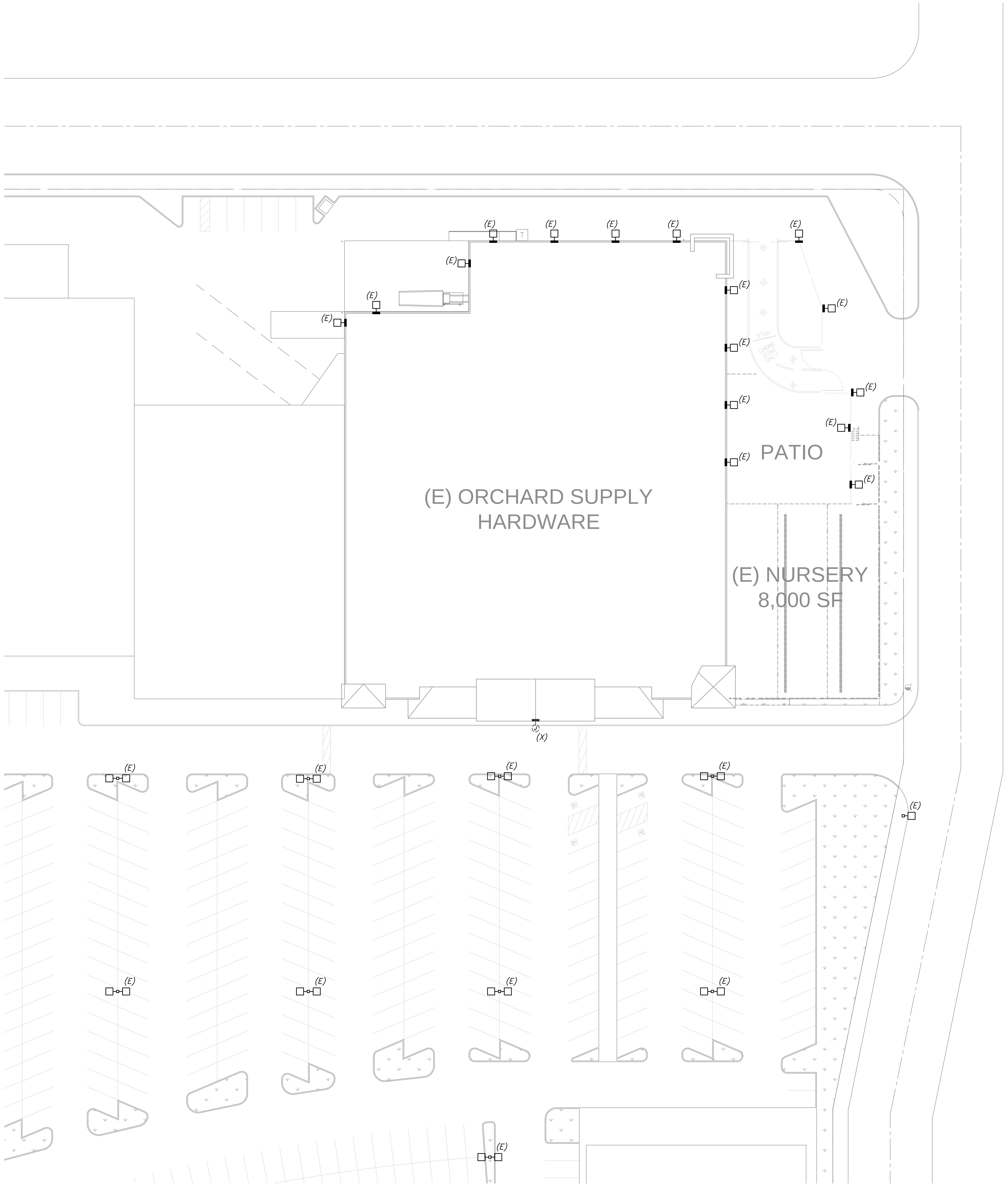
TITLE 24 CALCULATIONS

	DATE	REMARKS
1	09/25/2014	BUILDING DEPARTMENT SUBMITTAL
2	11/03/2014	BID SET

PM/ENG:	RP/JS
DRAWN BY:	RP
JOB NO.:	SNR14-0037-00

SHEET
E0.7B

11/03/2014 BID SET



A
E1.1

DEMO/EXISTING ELECTRICAL SITE PLAN

SCALE: 1" = 30'-0"

N

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GRANADA HILLS, CALIFORNIA

ELECTRICAL DETAILS

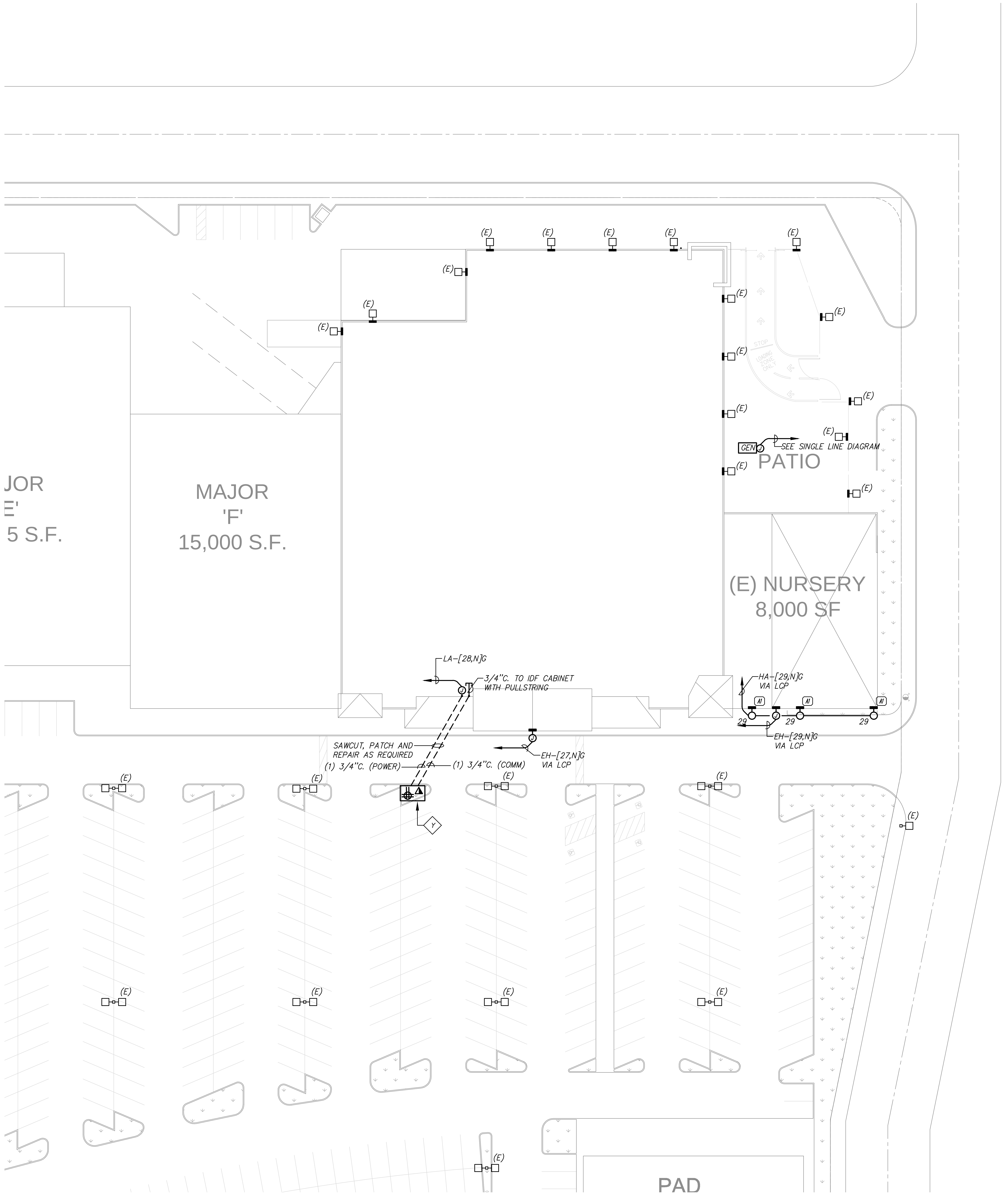
	DATE	REMARKS
1	09/25/2014	BUILDING DEPARTMENT SUBMITTAL
2	11/03/2014	BID SET

PM/ENG:	RP/JS
DRAWN BY:	RP
JOB NO.:	SNR14-0037-00

SHEET

E1.1

11/03/2014 BID SET



A	ELECTRICAL SITE PLAN
E1.2	SCALE: 1" = 30'-0"

GENERAL NOTES

1. ELECTRICAL CONTRACTOR SHALL CLEAN ALL EXISTING EXTERIOR BUILDING MOUNTED FIXTURES, PERTAINING TO THIS TENANT, THAT ARE TO REMAIN. PROVIDE NEW LAMPS AND BALLASTS AS NECESSARY.

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GRANADA HILLS, CALIFORNIA

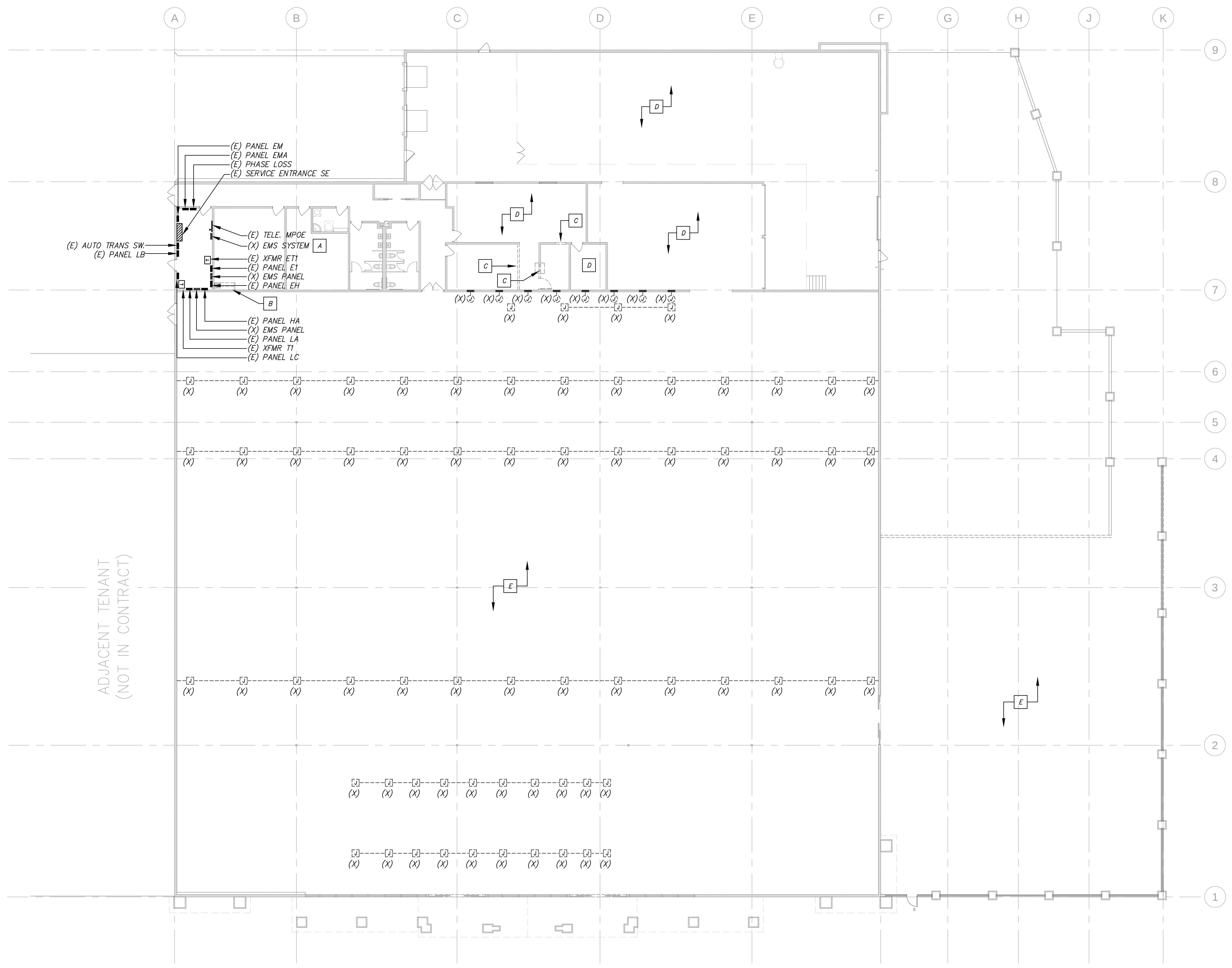
ELECTRICAL SITE PLAN

	DATE	REMARKS
1	09/25/2014	BUILDING DEPARTMENT SUBMITTAL
2	11/03/2014	BID SET

PM/ENG:	RP/JS
DRAWN BY:	RP
JOB NO.:	SNR14–0037–00

SHEET
E1.2

11/03/2014 BID SET



GENERAL NOTES

1. NO ELECTRICAL DEMOLITION WORK TO BE DONE IN THE RECEIVING AREA OR THE WAREHOUSE AREA.
2. REMOVE ALL ELECTRICAL DEVICES AND EQUIPMENT THAT IS IN CONFLICT WITH NEW CONDITIONS AS NECESSARY.

SHEET NOTES

A	REMOVE THE EXISTING ENERGY MANAGEMENT SYSTEM IN ITS ENTIRETY.
B	REMOVE EXISTING RECEPTACLES MOUNTED ABOVE THE CABINETRY THAT IS TO BE REMOVED. MAINTAIN CIRCUIT CONTINUITY WITH OTHER RECEPTACLES NOT BEING REMOVED.
C	REMOVE ELECTRICAL DEVICES AND EQUIPMENT ON THIS WALL THAT IS BEING REMOVED. MAINTAIN CIRCUIT CONTINUITY WITH OTHER RECEPTACLES NOT BEING REMOVED.
D	REMOVE EXISTING ELECTRICAL DEVICES AND EQUIPMENT WITHIN THIS ROOM THAT IS IN CONFLICT WITH NEW CONDITIONS.
E	REMOVE ALL EXISTING ELECTRICAL DEVICES AND EQUIPMENT WITHIN THIS AREA THAT ARE IN CONFLICT WITH THE NEW CONDITIONS.

IN–FLOOR DUCT DEMOLITION GENERAL NOTES

1. JUNCTION BOXES: REMOVE AND DISCARD THE JUNCTION BOX COVER. USING AN AEROSOL INSULATION FOAM, APPLY SUFFICIENT FOAM IN EACH ACCESSIBLE DUCT OPENING TO PREVENT CONCRETE FROM FLOWING INTO THE DUCT. WITH THE BOX COVER REMOVED AND THE DUCT RUNS PLUGGED, FILL THE EMPTY JUNCTION BOX WITH CONCRETE AND FINISH AT DESIRED HEIGHT.
2. ACTIVATED PRESETS: REMOVE BRASS TRIM AND RECEPTACLE. THE NOW EXPOSED 2" OPENING CAN BE CAPPED WITH A STEEL MUDCAP OR FILLED WITH CONCRETE.

A
E2.1

ELECTRICAL DEMOLITION PLAN

SCALE: 1/16" = 1'–0"

JP #14128

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9/24/14

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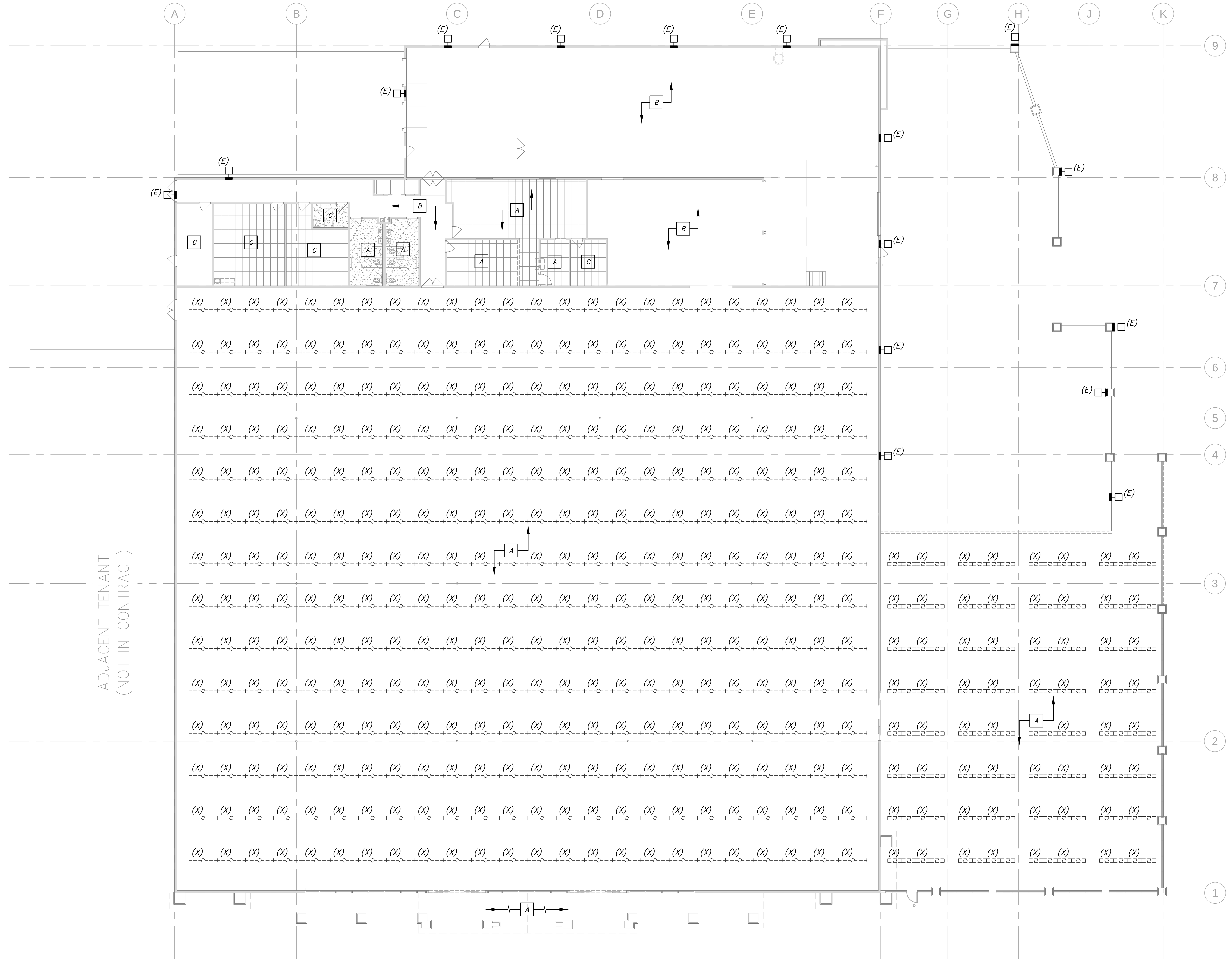
ELECTRICAL DEMOLITION PLAN

	DATE	REMARKS
1	09/25/2014	BUILDING DEPARTMENT SUBMITTAL
2	11/03/2014	BID SET

PM/ENG:	RP/JS
DRAWN BY:	RP
JOB NO.:	SNR14–0037–00

SHEET
E2.1

11/03/2014 BID SET



A	LIGHTING DEMOLITION PLAN
E2.2	SCALE: 1/16" = 1'-0"

GENERAL NOTES

1. NO ELECTRICAL DEMOLITION WORK TO BE DONE IN THE RECEIVING AREA OR THE WAREHOUSE AREA.
2. REMOVE ALL ELECTRICAL DEVICES AND EQUIPMENT THAT IS IN CONFLICT WITH NEW CONDITIONS AS NECESSARY.

SHEET NOTES

A	REMOVE ALL LIGHTING FIXTURES WITHIN THIS AREA.
B	LIGHTING WITHIN THIS AREA IS EXISTING TO REMAIN. TIE BRANCH CIRCUITS INTO NEW LIGHTING CONTROL PANEL.
C	LIGHTING WITHIN THIS AREA IS EXISTING TO REMAIN. REPLACE LOCAL SWITCHING WITH NEW VACANCY SENSOR AS NECESSARY.

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LIGHTING DEMOLITION PLAN

	DATE	REMARKS
1	09/25/2014	BUILDING DEPARTMENT SUBMITTAL
2	11/03/2014	BID SET

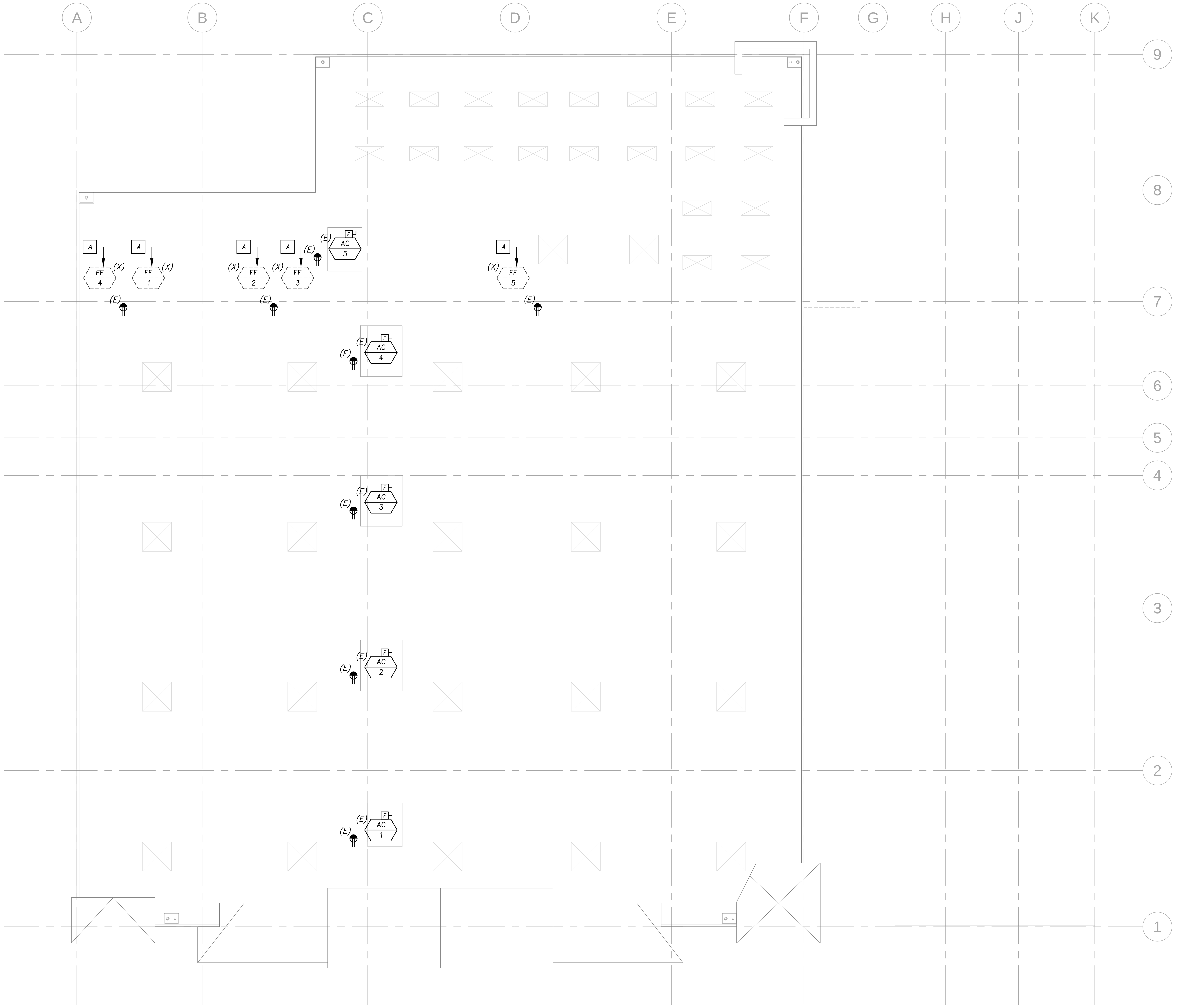
PM/ENG:	RP/JS
DRAWN BY:	RP
JOB NO.:	SNR14-0037-00

SHEET
E2.2

11/03/2014 BID SET

SHEET NOTES

A	REMOVE THE EXISTING EXHAUST FANS AND DISCONNECTING MEANS. SEE SHEET E3.4 FOR NEW CONDITIONS.



A
E2.3

ROOF ELECTRICAL DEMOLITION PLAN

SCALE: 1/16" = 1'-0"

N

JP #14128

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SUPPLY HARDWARE

18060 CHATSWORTH STREET
GRANADA HILLS, CALIFORNIA

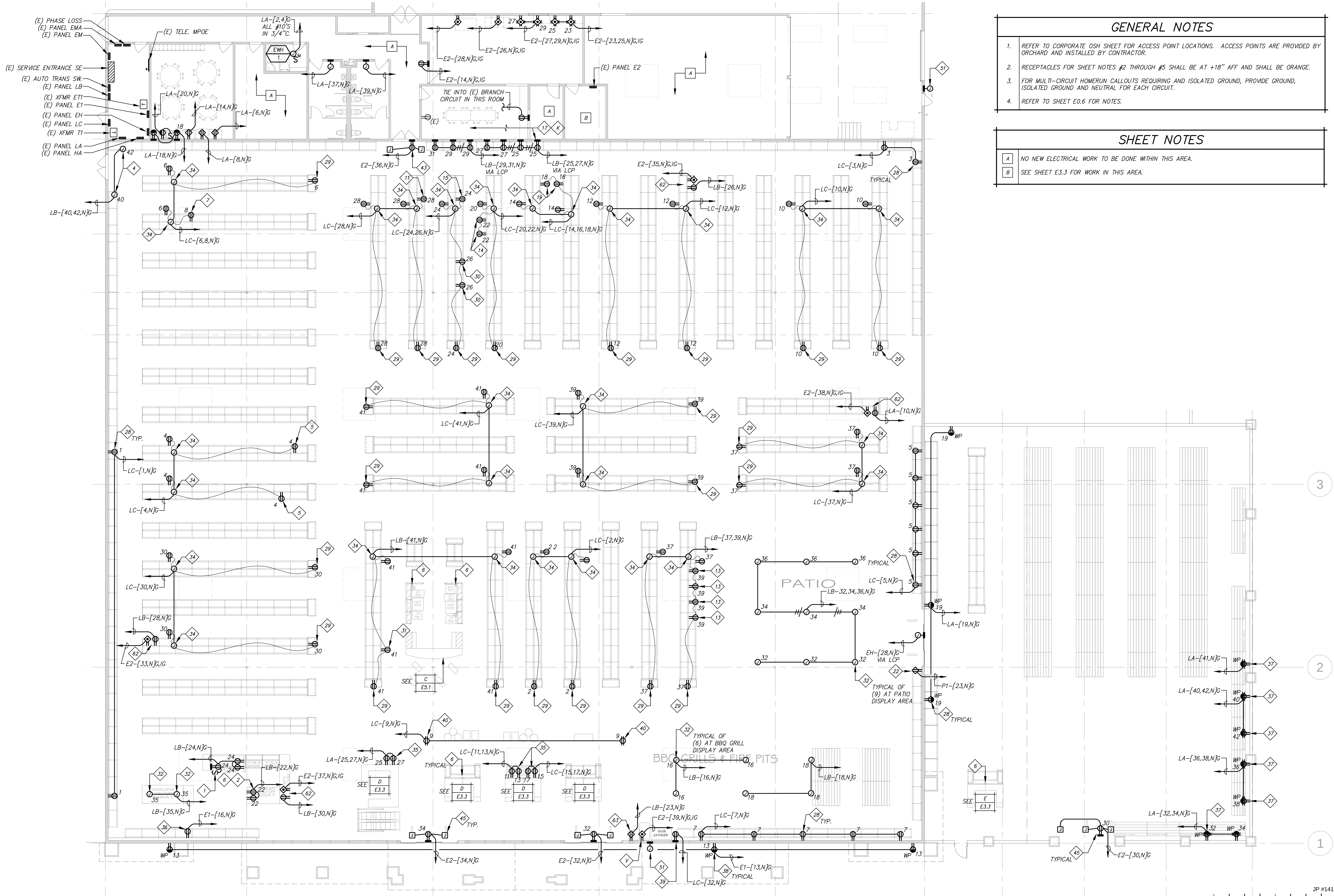
ROOF ELECTRICAL DEMOLITION PLAN

	DATE	REMARKS
1	09/25/2014	BUILDING DEPARTMENT SUBMITTAL
2	11/03/2014	BID SET

PM/ENG:	RP/JS
DRAWN BY:	RP
JOB NO.:	SNR14-0037-00

SHEET
E2.3

11/03/2014 BID SET



GENERAL NOTES

1. REFER TO CORPORATE OSH SHEET FOR ACCESS POINT LOCATIONS. ACCESS POINTS ARE PROVIDED BY ORCHARD AND INSTALLED BY CONTRACTOR.
2. RECEPTACLES FOR SHEET NOTES #2 THROUGH #5 SHALL BE AT +18" AFF AND SHALL BE ORANGE.
3. FOR MULTI–CIRCUIT HOMERUN CALLOUTS REQUIRING AND ISOLATED GROUND, PROVIDE GROUND, ISOLATED GROUND AND NEUTRAL FOR EACH CIRCUIT.
4. REFER TO SHEET E0.6 FOR NOTES.

SHEET NOTES

A	NO NEW ELECTRICAL WORK TO BE DONE WITHIN THIS AREA.
B	SEE SHEET E3.3 FOR WORK IN THIS AREA.

A	POWER PLAN
E3.1	SCALE: 3/32" = 1'–0"

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BID DOCUMENTS
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est. 1931
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18060 CHATSWORTH STREET
GRANADA HILLS, CALIFORNIA

POWER PLAN

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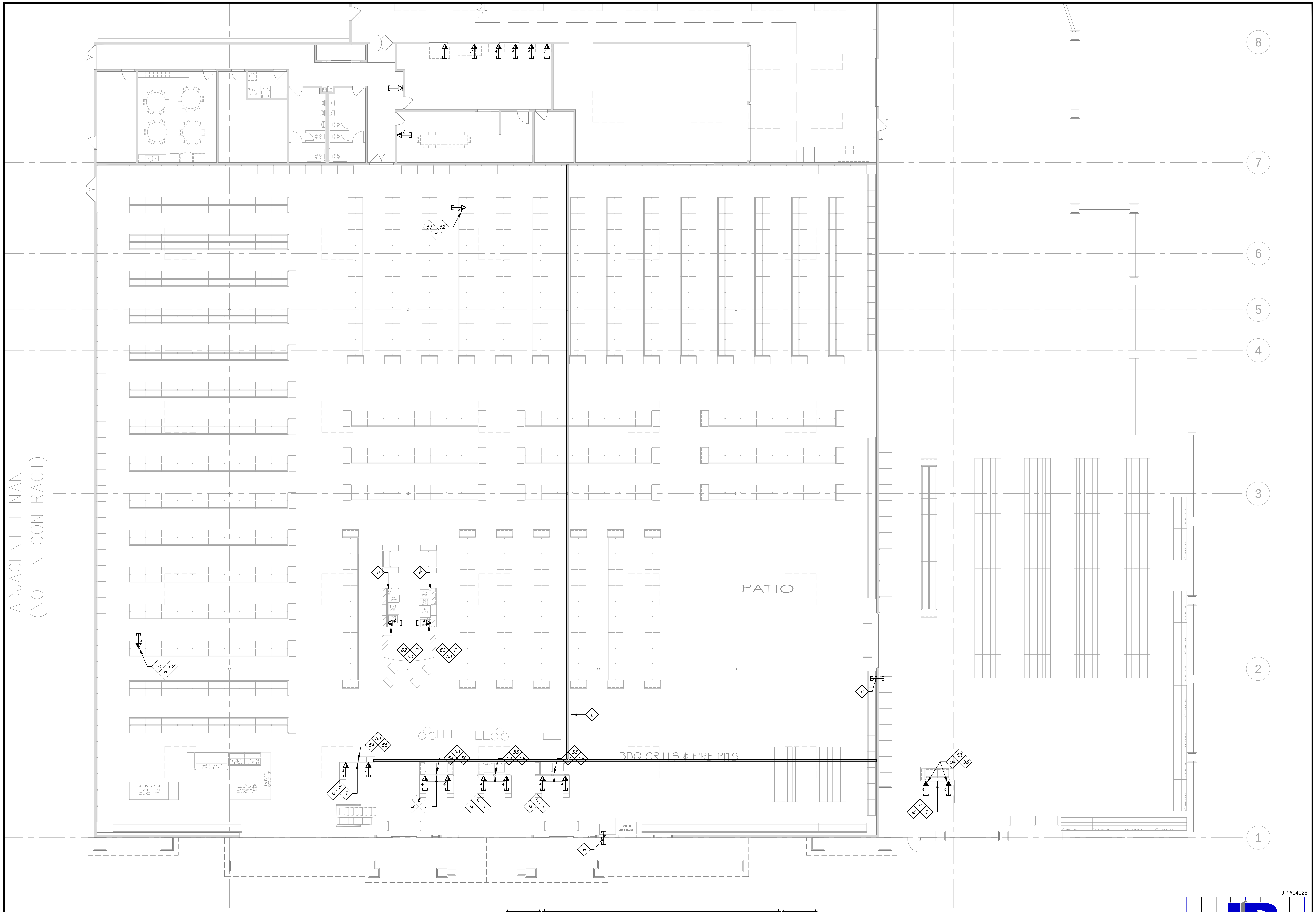
PM/ENG:	RP/JS
DRAWN BY:	RP
JOB NO.:	SNR14–0037–00

SHEET
E3.1

11/03/2014 BID SET



A	SIGNAL PLAN
E3.2	SCALE: 3/32" = 1'-0"

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SIGNAL PLAN

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DRAWN BY:	RP
JOB NO.:	SNR14-0037-00

SHEET
E3.2

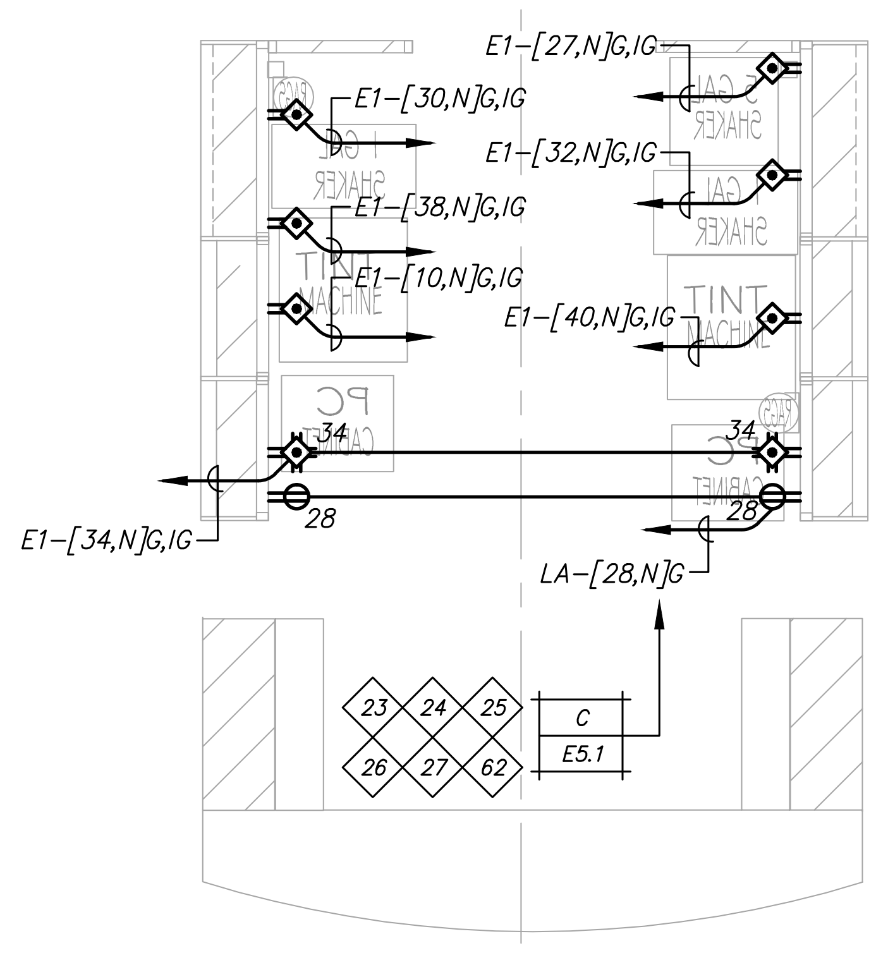
11/03/2014 BID SET

GENERAL NOTES

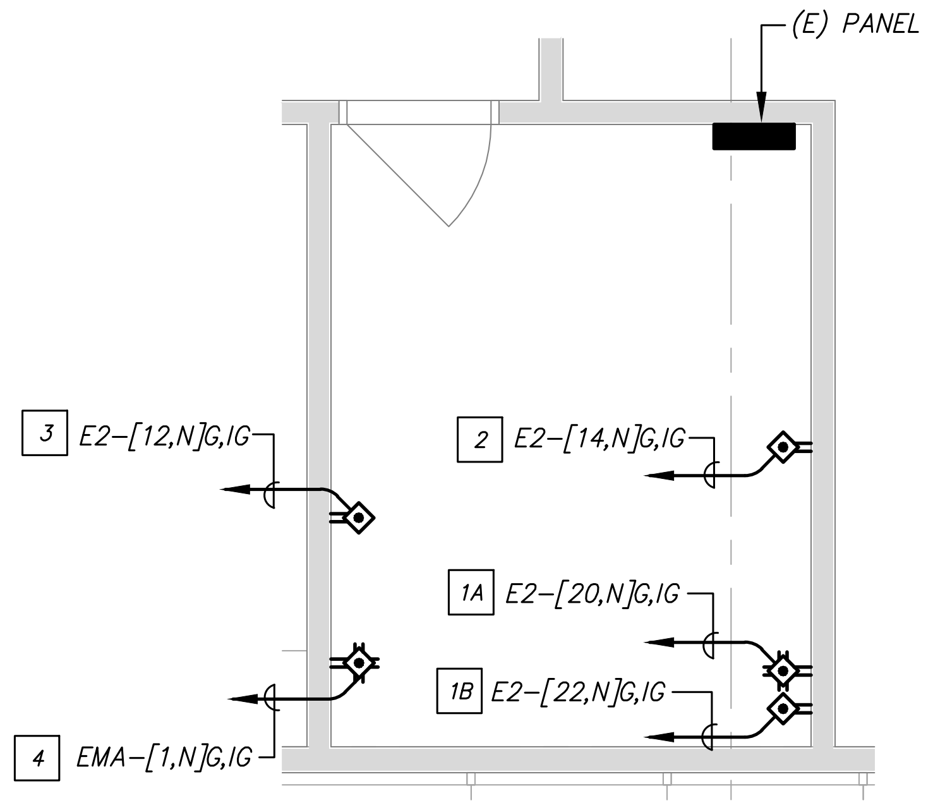
1.	REFER TO CORPORATE OSH SHEET FOR ACCESS POINT LOCATIONS. ACCESS POINTS ARE PROVIDED BY ORCHARD AND INSTALLED BY CONTRACTOR.
2.	REFER TO SHEET E0.6 FOR NOTES.

MDF ROOM SHEET NOTES

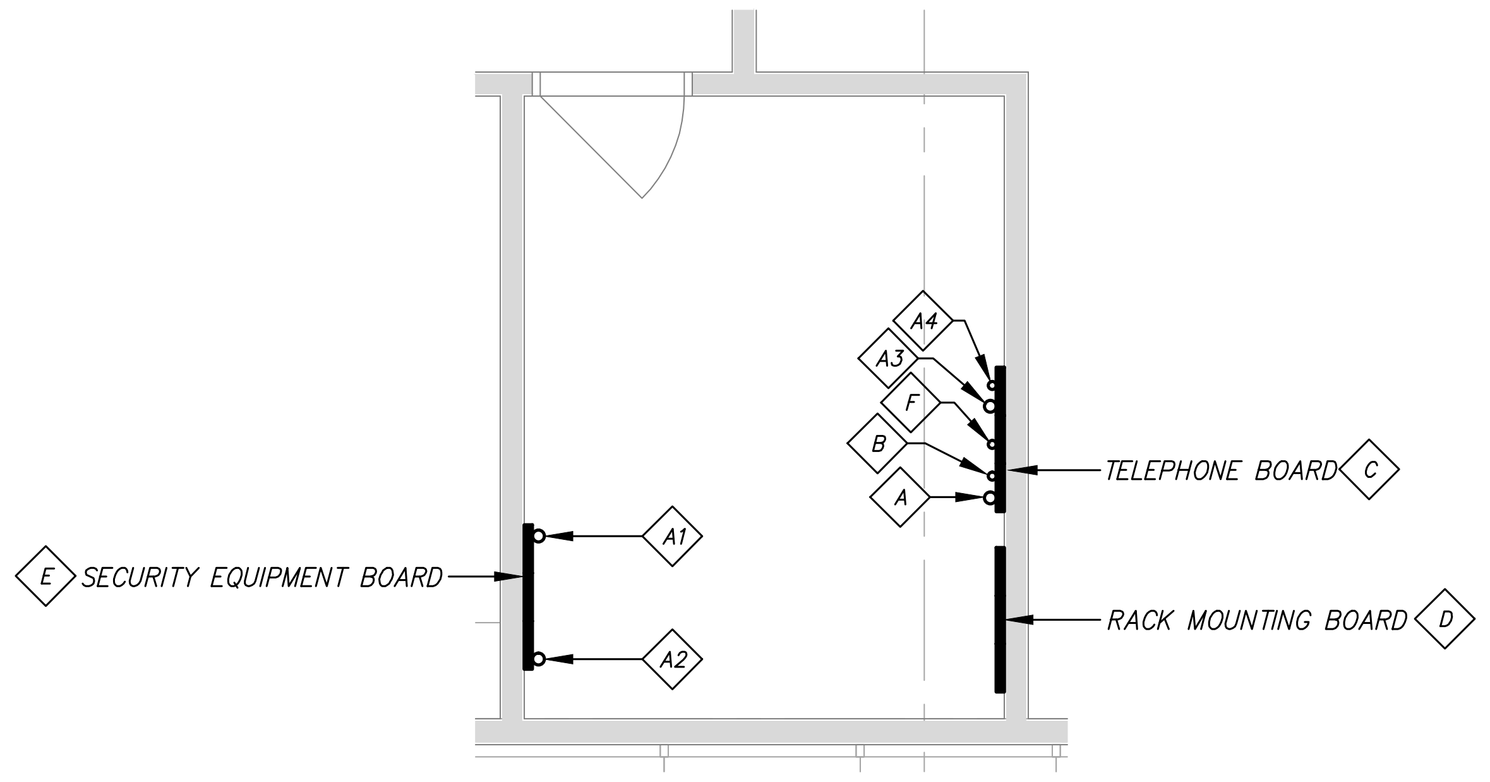
1A	PROVIDE (1) DEDICATED 30 AMP, NEMA–L30 RECEPTACLE CIRCUITED FROM PANEL EP3 FOR CLEAN, GENERATED POWER. LOCATE OUTLET +18" AFF AND AT LEAST 22" AWAY FROM RACK.
1B	PROVIDE (1) DEDICATED 30 AMP, DOUBLE DUPLEX RECEPTACLE CIRCUITED FROM PANEL EP3 FOR CLEAN, GENERATED POWER. LOCATE OUTLET +18" AFF AND AT LEAST 22" AWAY FROM RACK.
2	PROVIDE (1) DEDICATED 20 AMP DUPLEX RECEPTACLE CIRCUITED FROM PANEL EP3 FOR CLEAN, GENERATED POWER FOR PHONE BOARD.
3	PROVIDE (1) DEDICATED 20 AMP DOUBLE DUPLEX RECEPTACLE CIRCUITED FROM PANEL EP3 FOR CLEAN, GENERATED POWER SECURITY SYSTEM.
4	PROVIDE (1) DEDICATED 20 AMP DUPLEX RECEPTACLE CIRCUITED FROM PANEL EP3 FOR CLEAN, GENERATED POWER FOR FIRE ALARM SYSTEM.



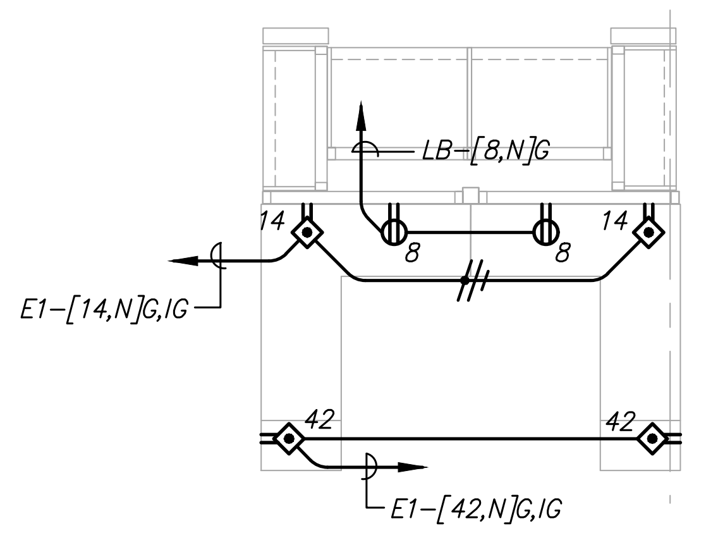
C
E3.3
PAINT CENTER ELECTRICAL DETAIL
SCALE: 1/4" = 1'-0"



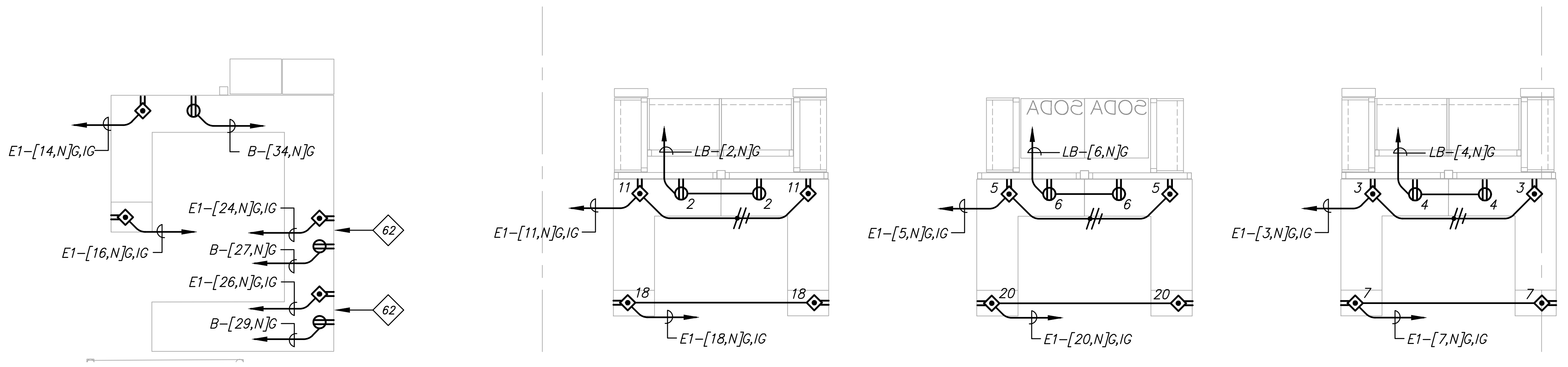
B
E3.3
MDF ROOM POWER PLAN
SCALE: 1/4" = 1'-0"



A
E3.3
MDF ROOM CONDUIT DROP & BACKBOARD LAYOUT
SCALE: 1/4" = 1'-0"



E
E3.3
NURSERY CHECKSTAND ELECTICAL DETAIL
SCALE: 1/4" = 1'-0"



D
E3.3
CHECKSTAND/CUSTOMER SERVICE ELECTRICAL DETAIL
SCALE: 1/4" = 1'-0"

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ENLARGED ELECTRICAL PLANS - MDF ROOM AND CHECKSTANDS

	DATE	REMARKS
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2	11/03/2014	BID SET

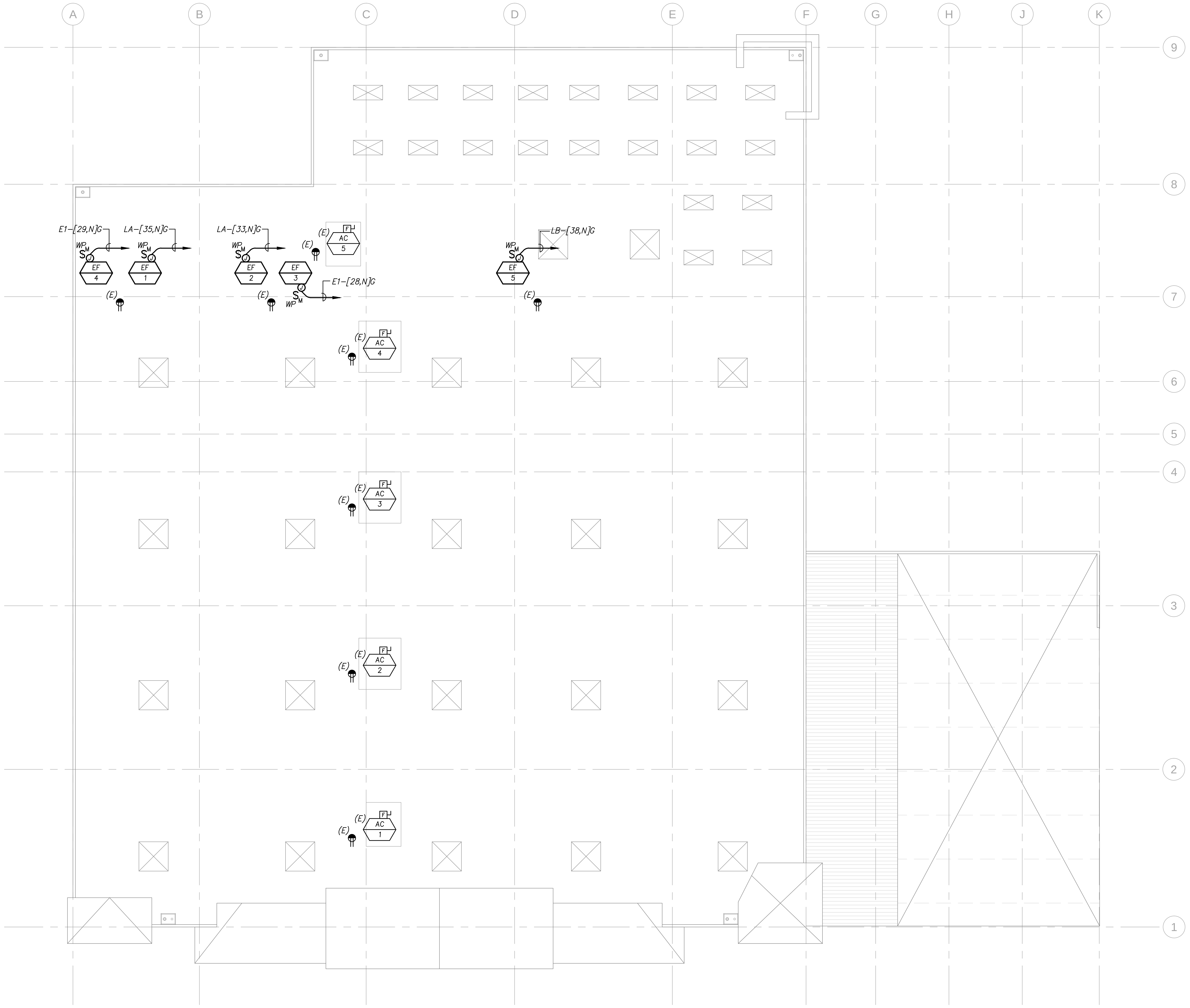
PM/ENG:	RP/JS
DRAWN BY:	RP
JOB NO.:	SNR14–0037–00

SHEET
E3.3

11/03/2014 BID SET

GENERAL NOTES

1. ROOF MAINTENANCE RECEPTACLES ARE EXISTING.



A
E3.4

ROOF POWER PLAN

SCALE: 3/32" = 1'-0"

N

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ROOF POWER PLAN

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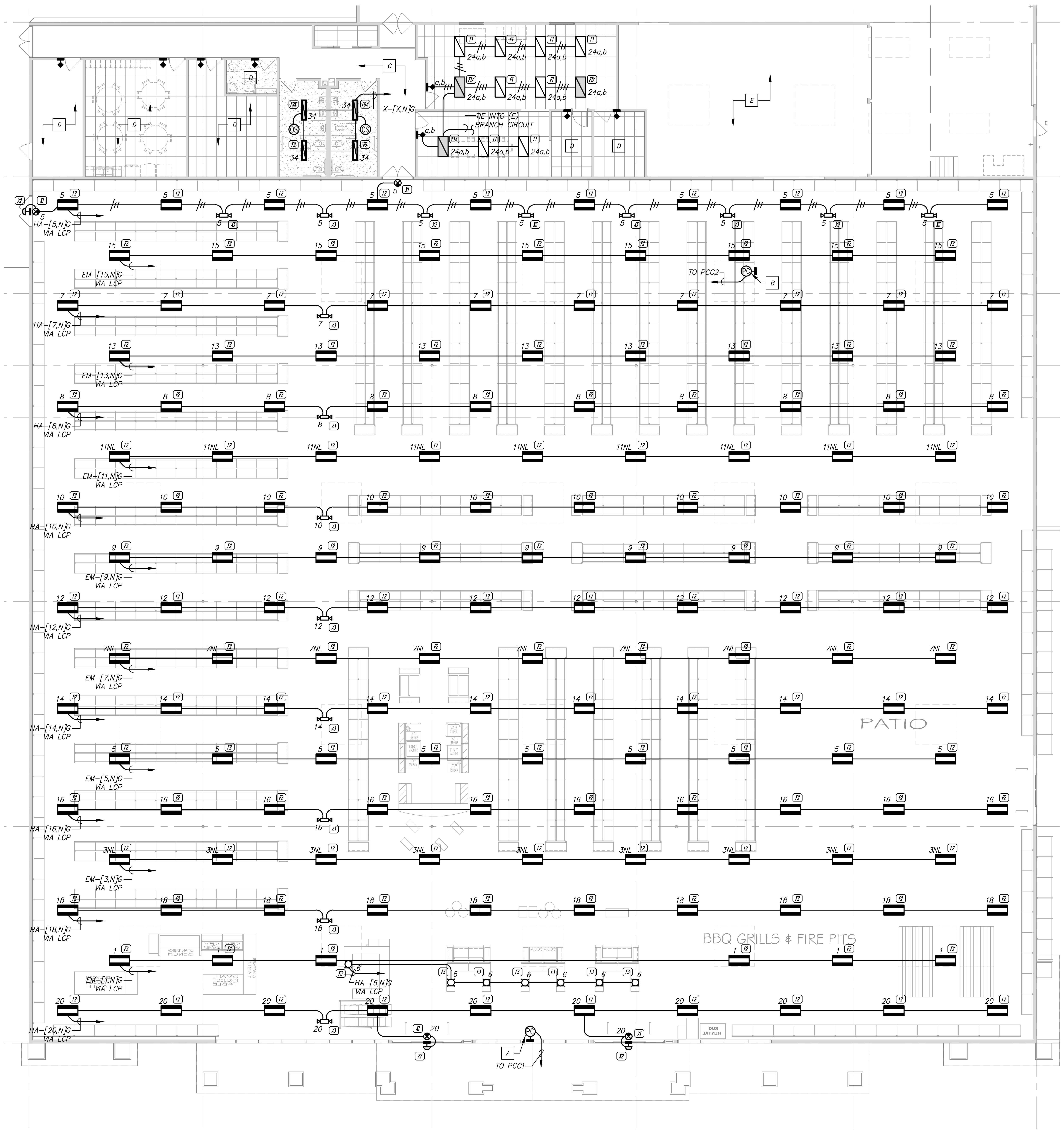
SHEET
E3.4

11/03/2014 BID SET



SHEET NOTES

A	PROVIDE A PHOTOCELL (10% SET POINT AND 5 MINUTE MINIMUM TIME DELAY SETTING FOR COMPLETE OFF) LIGHTING CONTROL DEVICE MOUNTED ON THE WINDOW WALL OF THE STORE FRONT TO CONTROL THE LIGHTING WITHIN THE FIRST 15'–0" OF STORE SPACE AS REQUIRED.
B	PROVIDE A PHOTOCELL (10% SET POINT AND 5 MINUTE MINIMUM TIME DELAY SETTING FOR COMPLETE OFF) LIGHTING CONTROL DEVICE IS MOUNTED WITHIN THE SKYLIGHT TO CONTROL THE LIGHTING WITHIN THE SALES FLOOR AS REQUIRED.
C	EXISTING LIGHTING FIXTURES AND EMERGENCY EGRESS FIXTURES ARE TO REMAIN. CONTRACTOR SHALL CLEAN AND RELAMP FIXTURES AS NECESSARY.
D	LIGHT FIXTURES WITHIN THIS AREA ARE EXISTING TO REMAIN. CONTRACTOR SHALL CLEAN, RELAMP AND RE–BALLAST AS NECESSARY FOR A COMPLETE AND FUNCTIONING FIXTURE. TIE EXISTING FIXTURES INTO A NEW VACANCY SENSOR FOR CONTROL OF FIXTURES.
E	NO NEW ELECTRICAL WORK TO BE DONE WITHIN THIS AREA.

GENERAL NOTES

1.	FIXTURES THAT ARE FULLY SHADED SHALL HAVE A 90 MINUTE BATTERY PACK FOR (1) ONE T8 LAMP.
2.	FIXTURES THAT ARE HALF SHADED NL SHALL HAVE A 90 MINUTE BATTERY PACK FOR (1) ONE T8 LAMP AND SHALL HAVE (2) LAMPS BURNING AT ALL TIMES.
3.	ALL HALF SHADED AND FULLY SHADED FIXTURES SHALL BE POWERED UP FROM PANEL EH1 FOR FULL GENERATOR BACK–UP.
4.	ALL FIXTURES WITHIN THE SALES FLOOR AREA SHALL BE DUAL SWITCHED (EXCEPT AS MENTIONED ABOVE) AND HAVE THE ABILITY TO SWITCH LAMPS OFF AND FUNCTION WITH THE LIGHTING CONTROL SYSTEM AND THE PHOTOCELLS THAT ARE USED TO CONTROL THESE SPACES.

A
E4.1

LIGHTING PLAN

SCALE: 3/32" = 1'–0"

N

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SHEET
E4.1

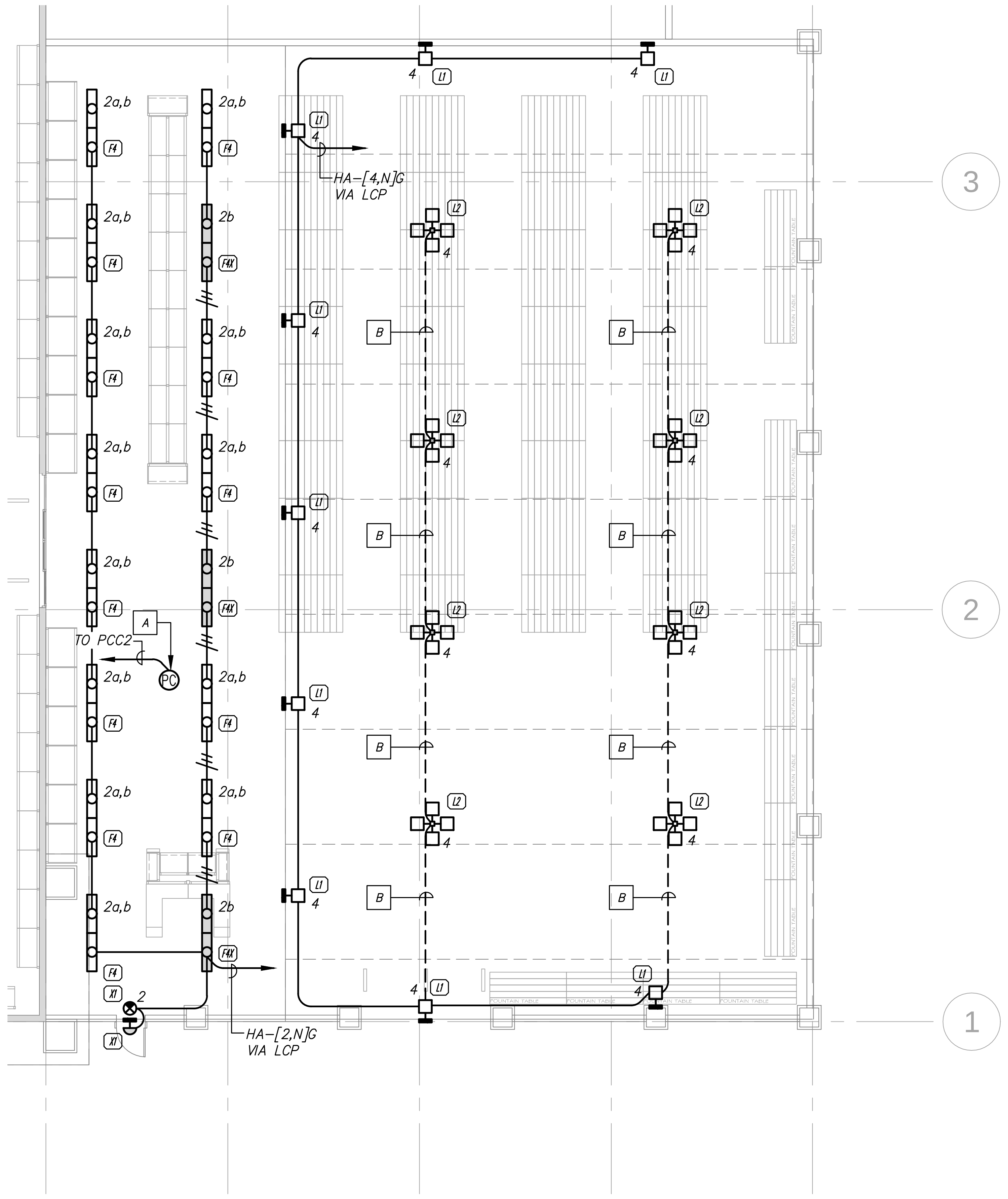
11/03/2014 BID SET

SHEET NOTES

A	PROVIDE A PHOTOCELL (10% SET POINT AND 5 MINUTE MINIMUM TIME DELAY SETTING FOR COMPLETE OFF) LIGHTING CONTROL DEVICE IS MOUNTED WITHIN 15' OF THE OVERHANG TO CONTROL THE LIGHTING WITHIN THE COVERED NURSERY AREA AS REQUIRED.
B	SAWCUT EXISTING CONCRETE AND ROUTE 3/4" CONDUIT TO NEW LIGHT POLE LOCATIONS. CONTRACTOR SHALL BACKFILL AND PATCH CONCRETE TO MATCH EXISTING CONCRETE.

GENERAL NOTES

1. FIXTURES THAT ARE FULLY SHADED SHALL HAVE A 90 MINUTE BATTERY PACK FOR (1) ONE T8 LAMP.
2. FIXTURES THAT ARE FULLY SHADED SHALL HAVE (2) LAMPS BURNING AT ALL TIMES.
3. ALL FIXTURES WITHIN THE SALES FLOOR AREA SHALL BE DUAL SWITCHED (EXCEPT AS MENTIONED ABOVE) AND HAVE THE ABILITY TO SWITCH LAMPS OFF AND FUNCTION WITH THE LIGHTING CONTROL SYSTEM AND THE PHOTOCELLS THAT ARE USED TO CONTROL THESE SPACES.



A | GARDEN CENTER LIGHTING PLAN
E4.2 | SCALE: 3/32" = 1'-0"

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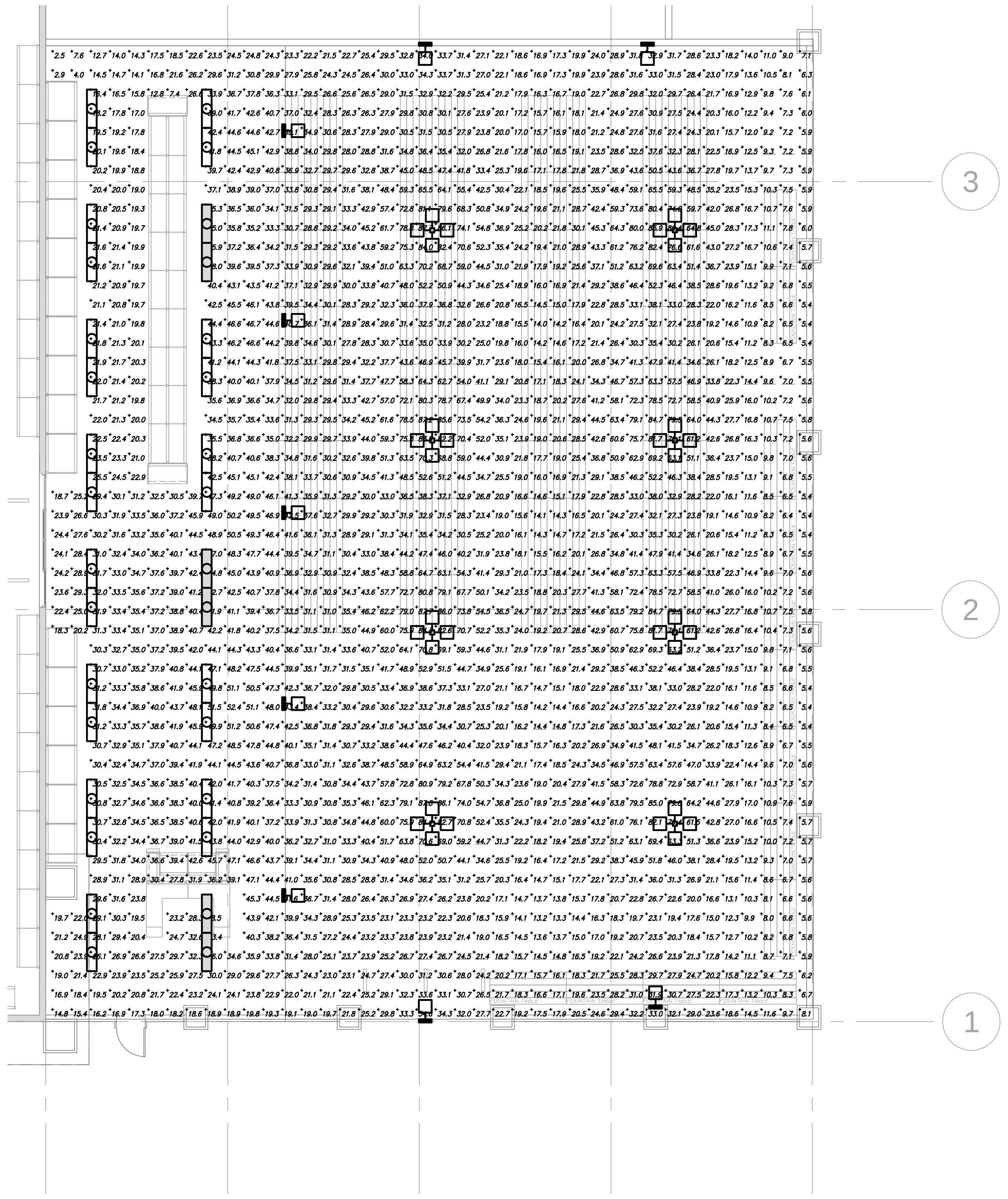
SHEET
E4.2

11/03/2014 BID SET

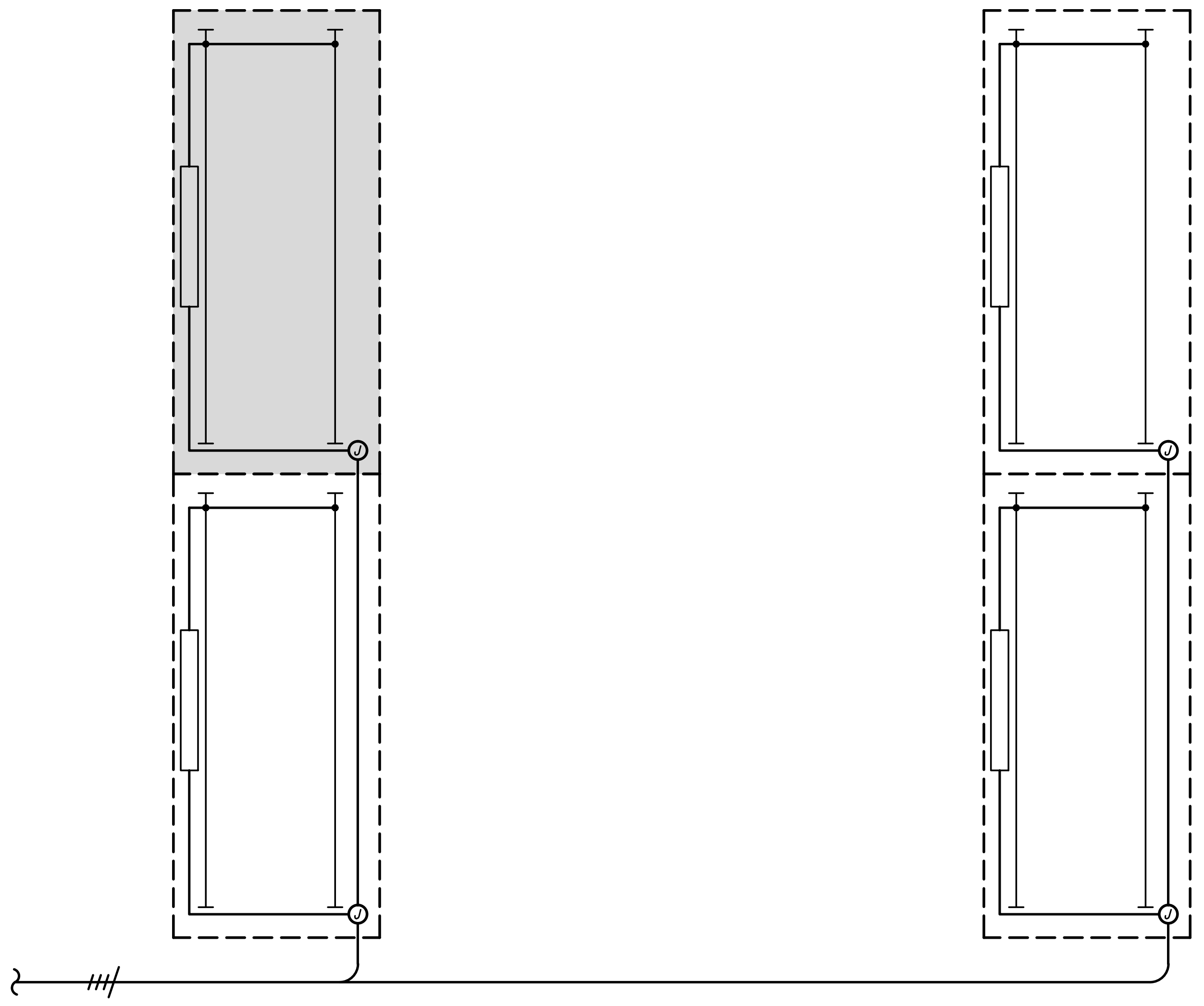


A
E4.3

GARDEN CENTER PHOTOMETRIC PLAN

SCALE: 3/32" = 1'-0"

N



B
E4.3

TYPICAL NURSERY AREA LIGHT FIXTURE WIRING

SCALE: NOT TO SCALE

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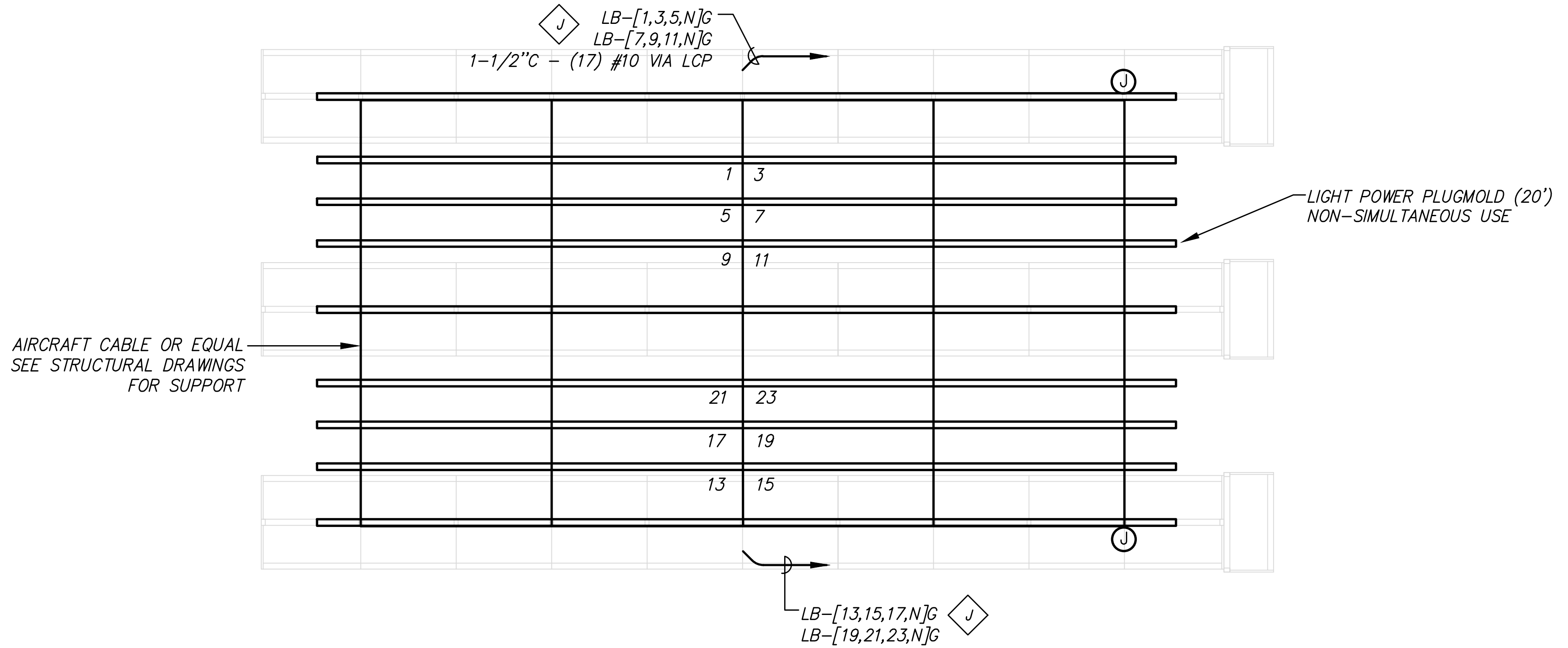
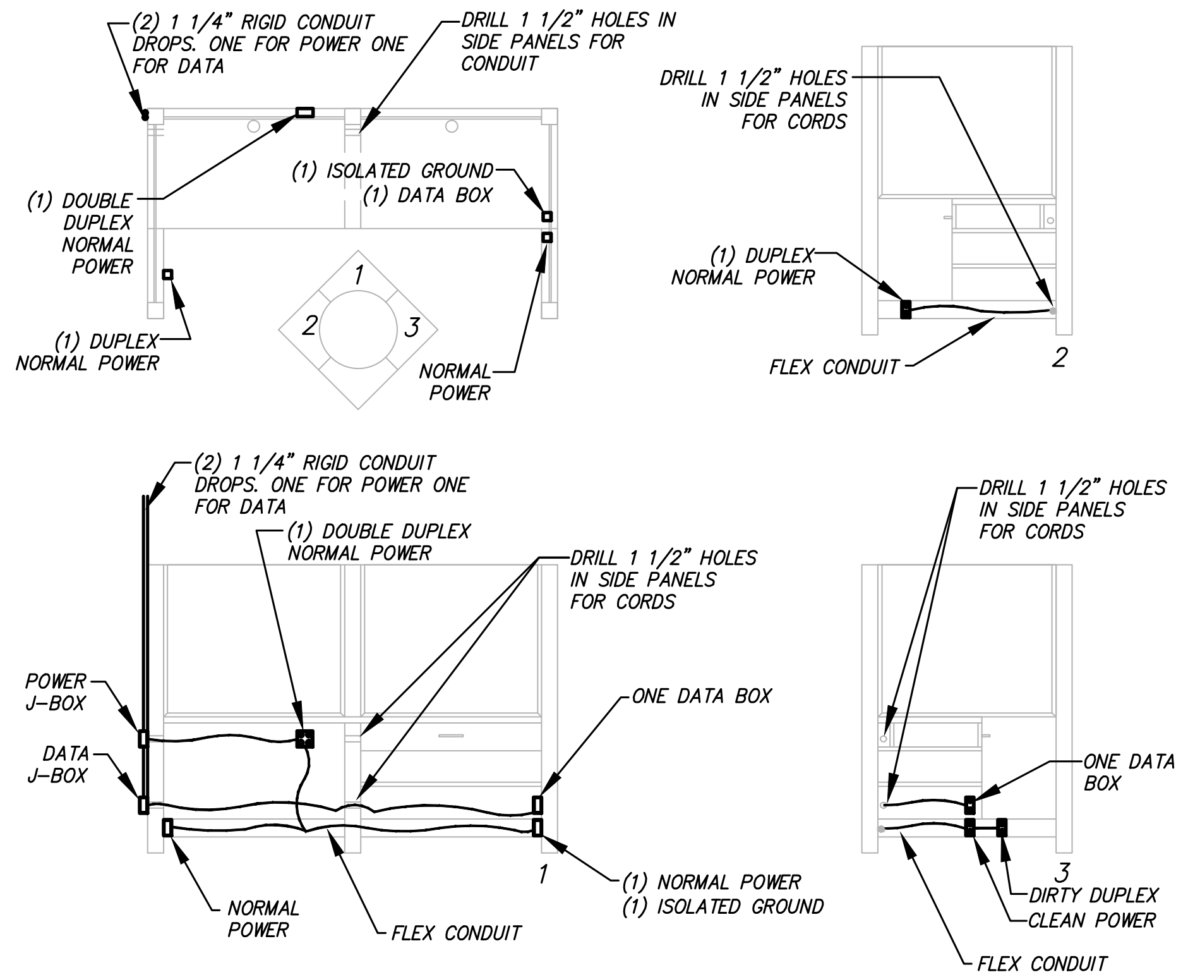


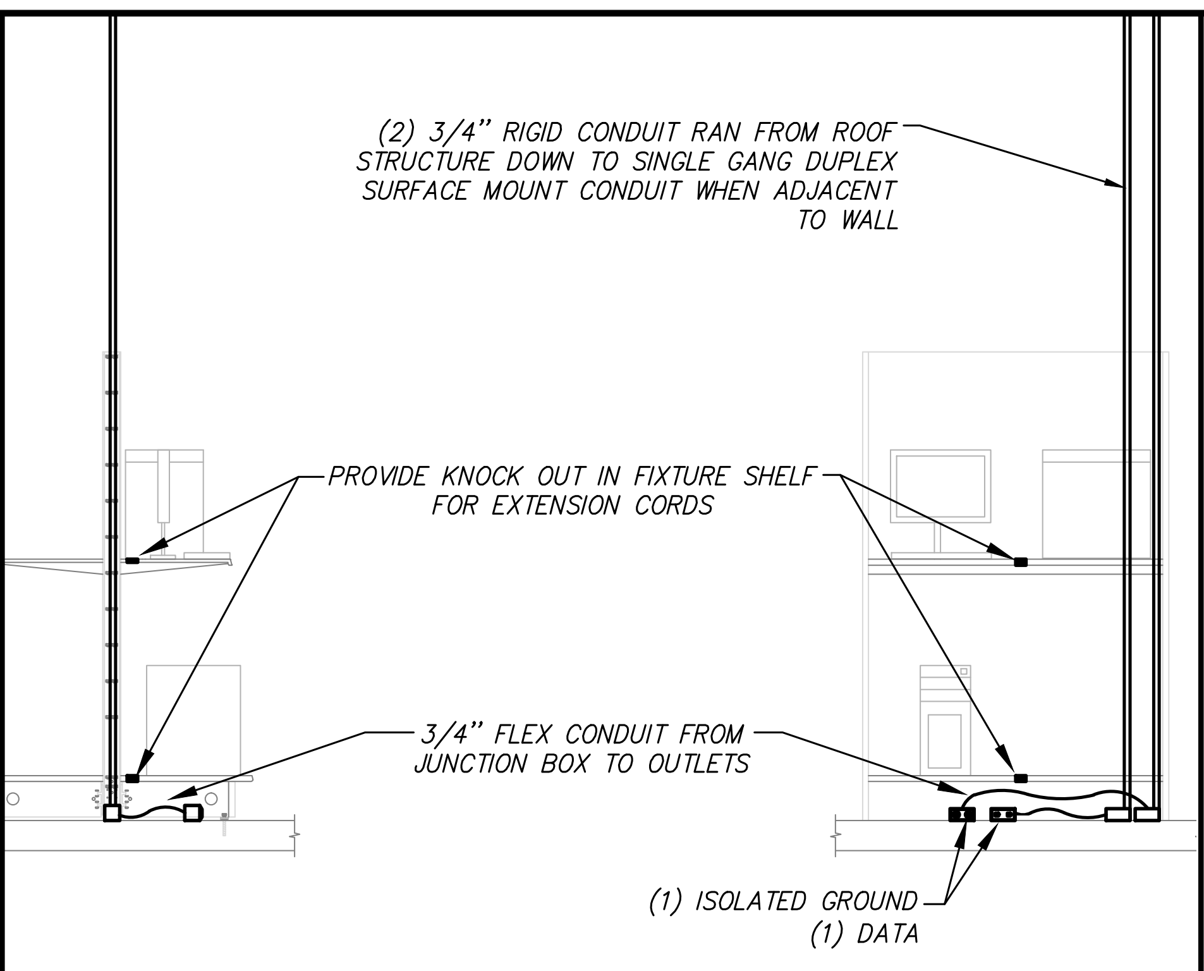
Q LIGHT CLOUD

3/16" = 1'–0"


(2) 1 1/4" RIGID CONDUIT DROPS. ONE FOR POWER ONE FOR DATA
DRILL 1 1/2" HOLES IN SIDE PANELS FOR CONDUIT
DRILL 1 1/2" HOLES IN SIDE PANELS FOR CORDS
(1) DOUBLE DUPLEX NORMAL POWER
(1) ISOLATED GROUND
(1) DATA BOX
(1) DUPLEX NORMAL POWER
1
2
3
(1) DUPLEX NORMAL POWER
NORMAL POWER
FLEX CONDUIT
2
(2) 1 1/4" RIGID CONDUIT DROPS. ONE FOR POWER ONE FOR DATA
(1) DOUBLE DUPLEX NORMAL POWER
DRILL 1 1/2" HOLES IN SIDE PANELS FOR CORDS
DRILL 1 1/2" HOLES IN SIDE PANELS FOR CORDS
POWER J–BOX
DATA J–BOX
ONE DATA BOX
ONE DATA BOX
1
(1) NORMAL POWER
(1) ISOLATED GROUND
NORMAL POWER
FLEX CONDUIT
3
DIRTY DUPLEX
CLEAN POWER
FLEX CONDUIT

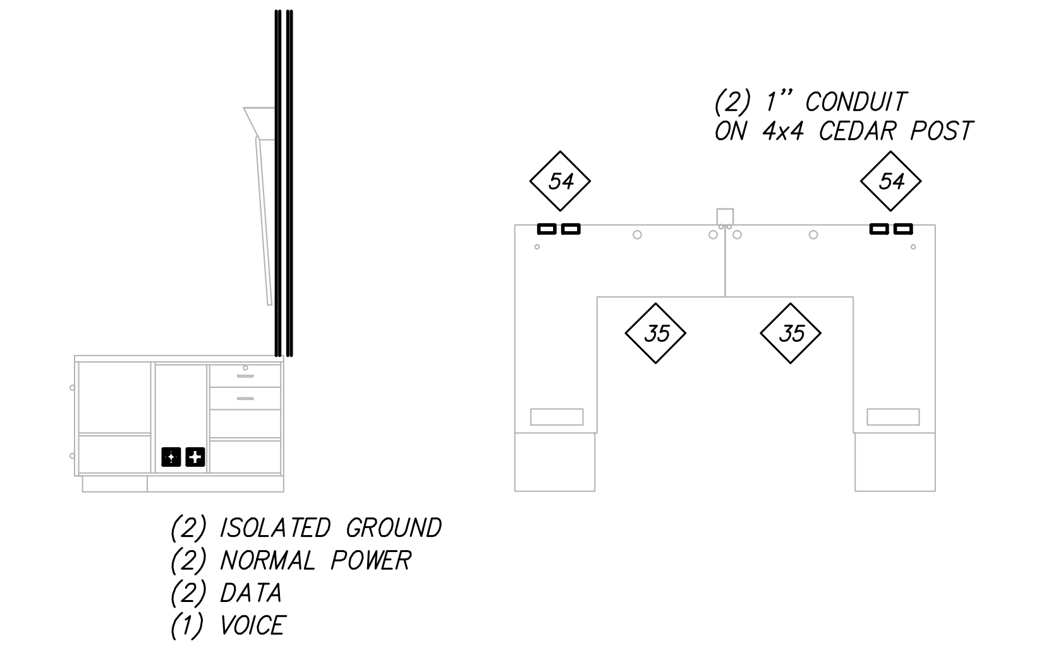
I SHARPENING BENCH

1/4" = 1'–0"


(2) 3/4" RIGID CONDUIT RAN FROM ROOF STRUCTURE DOWN TO SINGLE GANG DUPLEX SURFACE MOUNT CONDUIT WHEN ADJACENT TO WALL
PROVIDE KNOCK OUT IN FIXTURE SHELF FOR EXTENSION CORDS
3/4" FLEX CONDUIT FROM JUNCTION BOX TO OUTLETS
(1) ISOLATED GROUND
(1) DATA

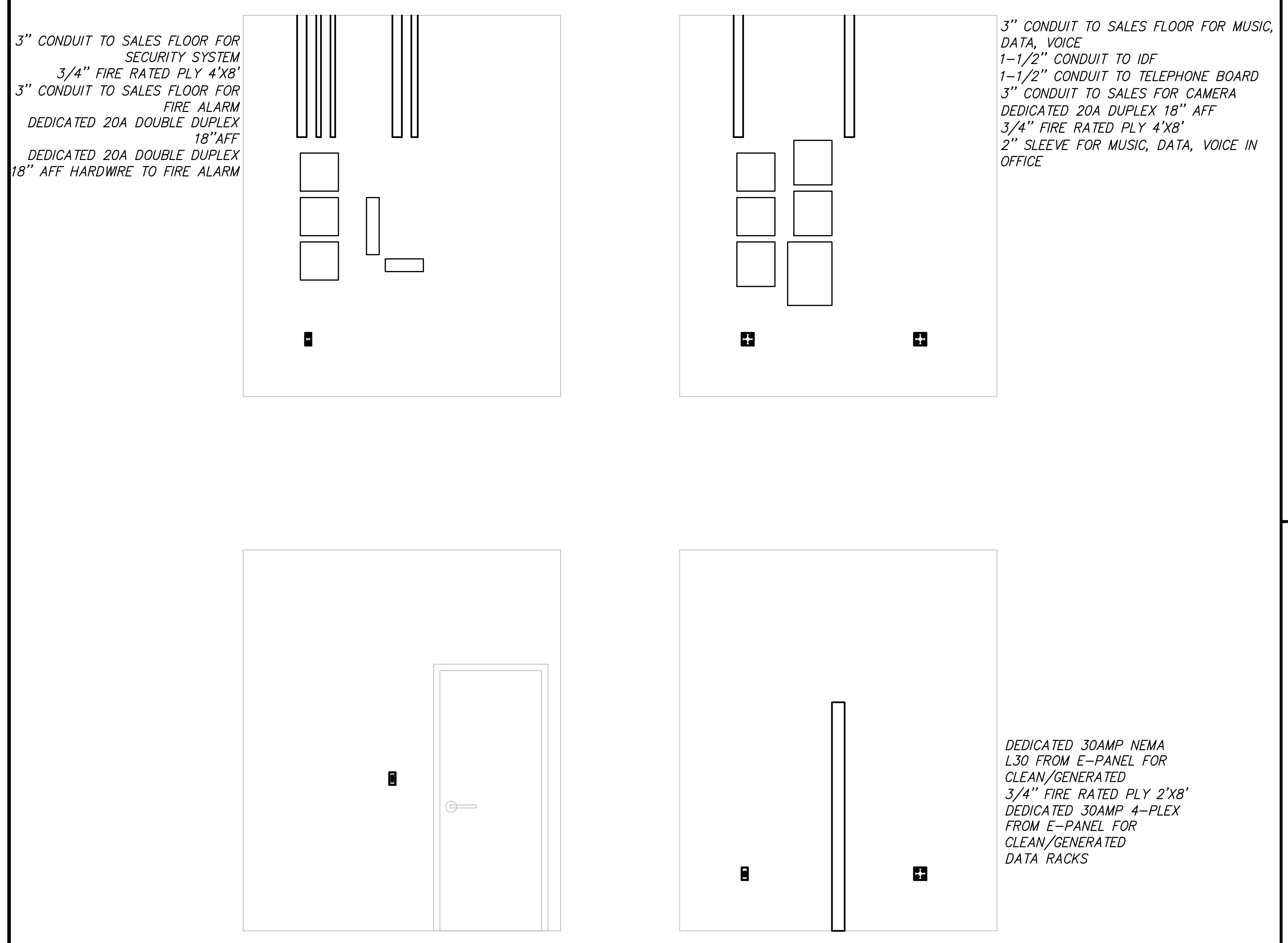
E INLINE WORK STATION

3/8" = 1'–0"



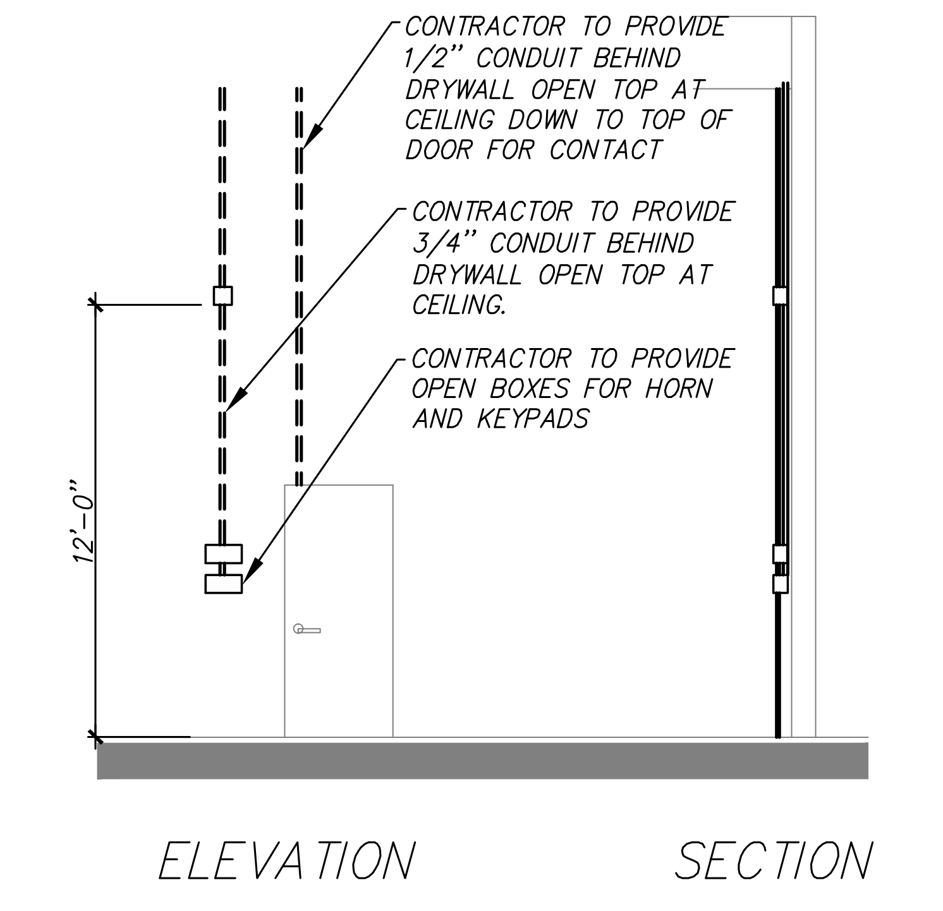
A CHECK STAND

1/4" = 1'–0"


3" CONDUIT TO SALES FLOOR FOR SECURITY SYSTEM
3/4" FIRE RATED PLY 4'X8'
3" CONDUIT TO SALES FLOOR FOR FIRE ALARM
DEDICATED 20A DOUBLE DUPLEX 18"AFF
DEDICATED 20A DOUBLE DUPLEX 18" AFF HARDWIRE TO FIRE ALARM
3" CONDUIT TO SALES FLOOR FOR MUSIC, DATA, VOICE
1–1/2" CONDUIT TO IDF
1–1/2" CONDUIT TO TELEPHONE BOARD
3" CONDUIT TO SALES FOR CAMERA
DEDICATED 20A DUPLEX 18" AFF
3/4" FIRE RATED PLY 4'X8'
2" SLEEVE FOR MUSIC, DATA, VOICE IN OFFICE
DEDICATED 30AMP NEMA L30 FROM E–PANEL FOR CLEAN/GENERATED
3/4" FIRE RATED PLY 2'X8'
DEDICATED 30AMP 4–PLEX FROM E–PANEL FOR CLEAN/GENERATED DATA RACKS

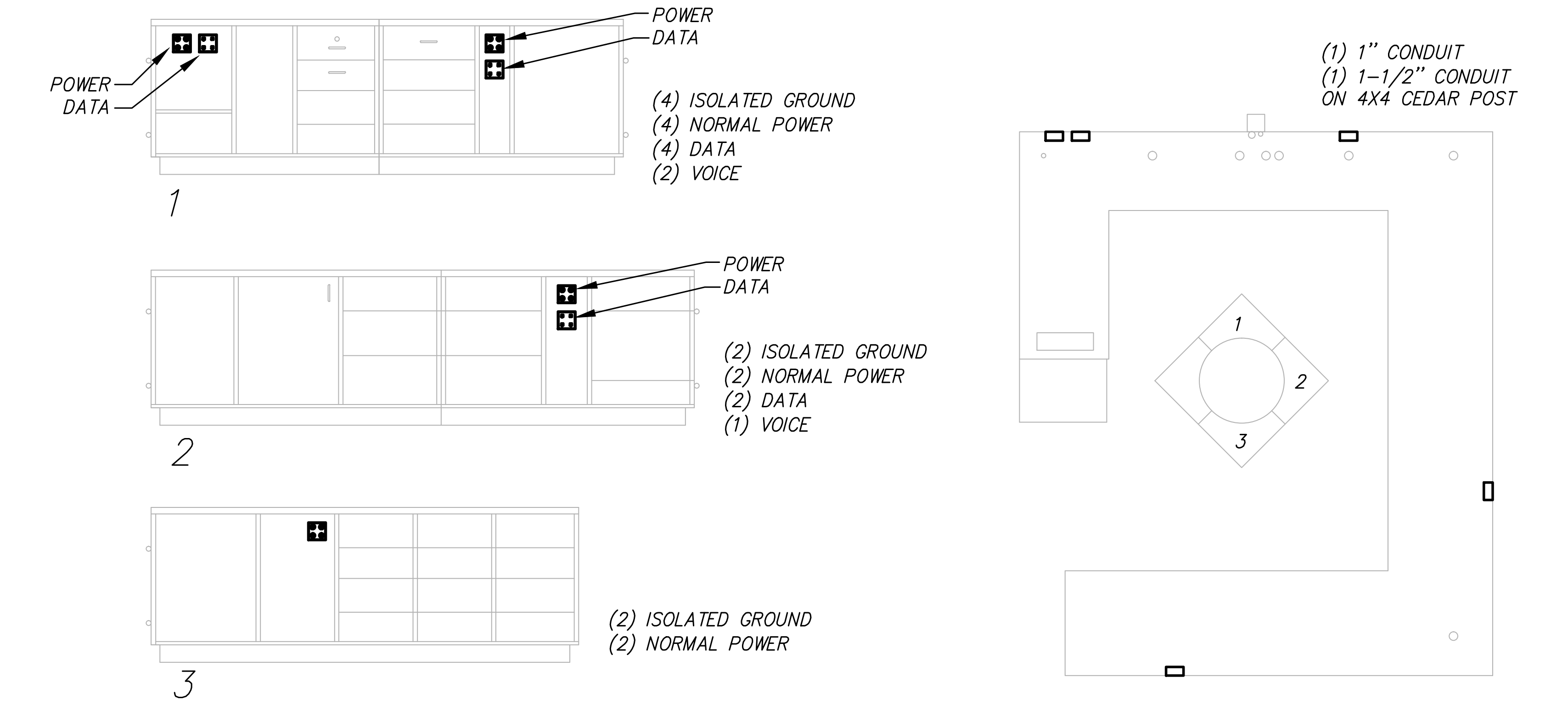
S DATA ROOM

3/8" = 1'–0"


CONTRACTOR TO PROVIDE 1/2" CONDUIT BEHIND DRYWALL OPEN TOP AT CEILING DOWN TO TOP OF DOOR FOR CONTACT
CONTRACTOR TO PROVIDE 3/4" CONDUIT BEHIND DRYWALL OPEN TOP AT CEILING.
CONTRACTOR TO PROVIDE OPEN BOXES FOR HORN AND KEYPADS
12'–0"
ELEVATION
SECTION

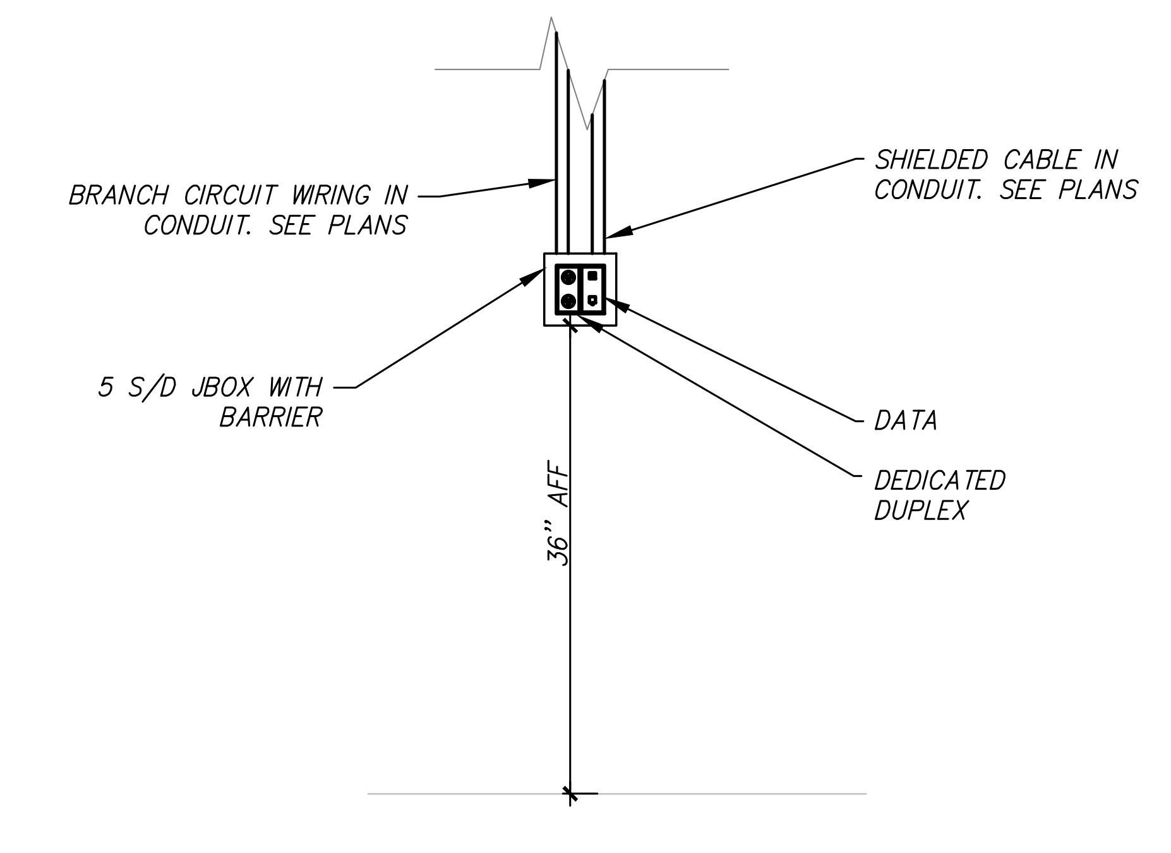
J KEYPAD

3/16" = 1'–0"



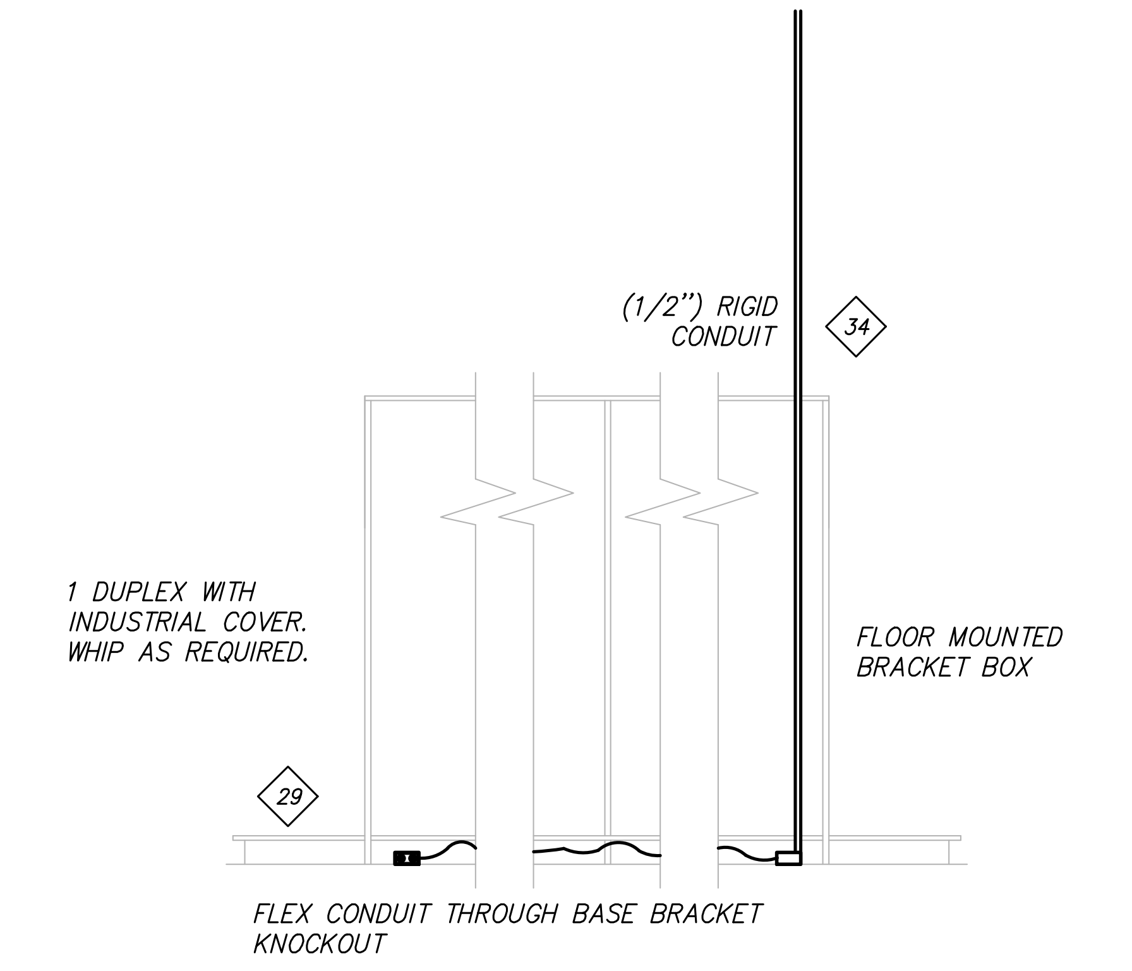
F CUSTOMER SERVICE DESK

3/8" = 1'–0"


BRANCH CIRCUIT WIRING IN CONDUIT. SEE PLANS
SHIELDED CABLE IN CONDUIT. SEE PLANS
5 S/D JBOX WITH BARRIER
DATA
DEDICATED DUPLEX
36" AFF

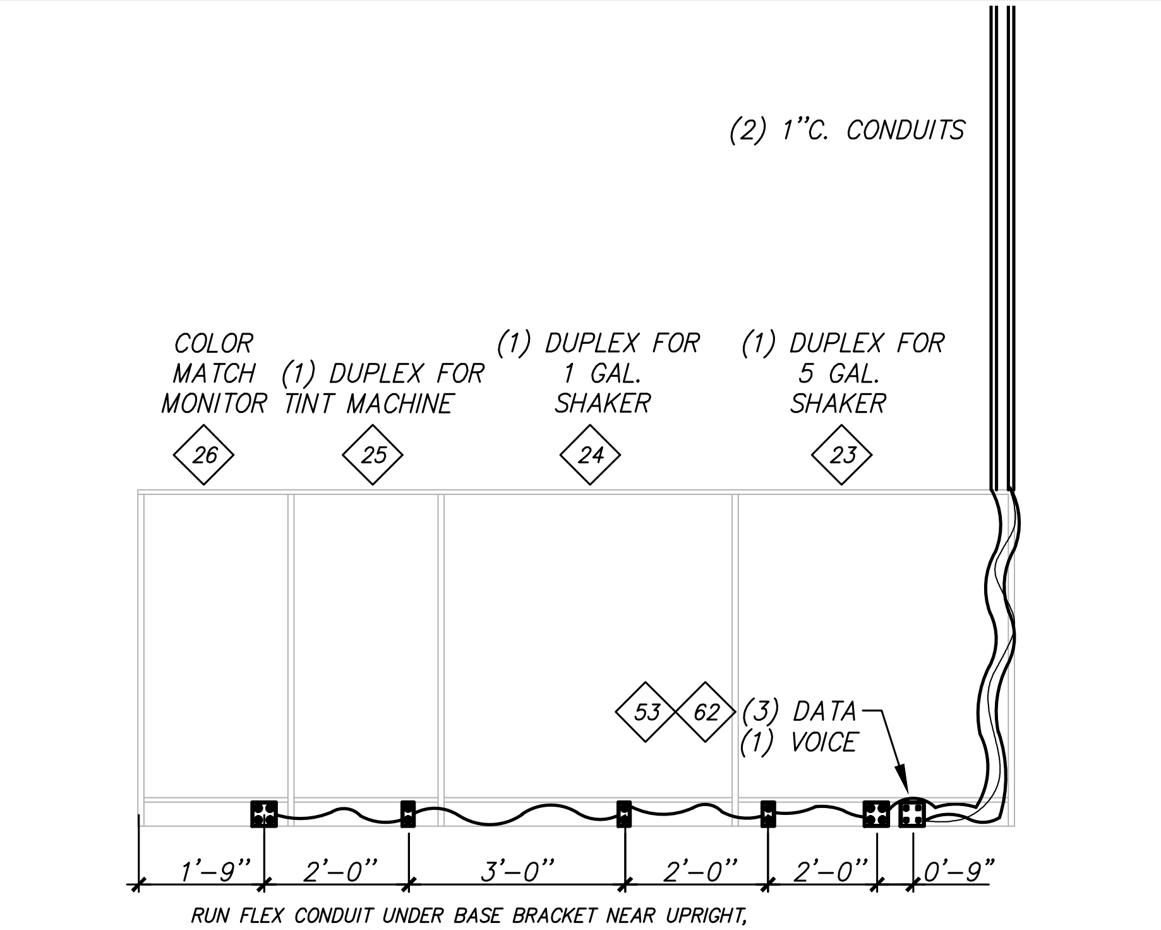
K EMPLOYEE CLOCK

3/4" = 1'–0"


(1/2") RIGID CONDUIT
34
1 DUPLEX WITH INDUSTRIAL COVER. WHIP AS REQUIRED.
FLOOR MOUNTED BRACKET BOX
29
FLEX CONDUIT THROUGH BASE BRACKET KNOCKOUT

G TYPICAL GONDOLA

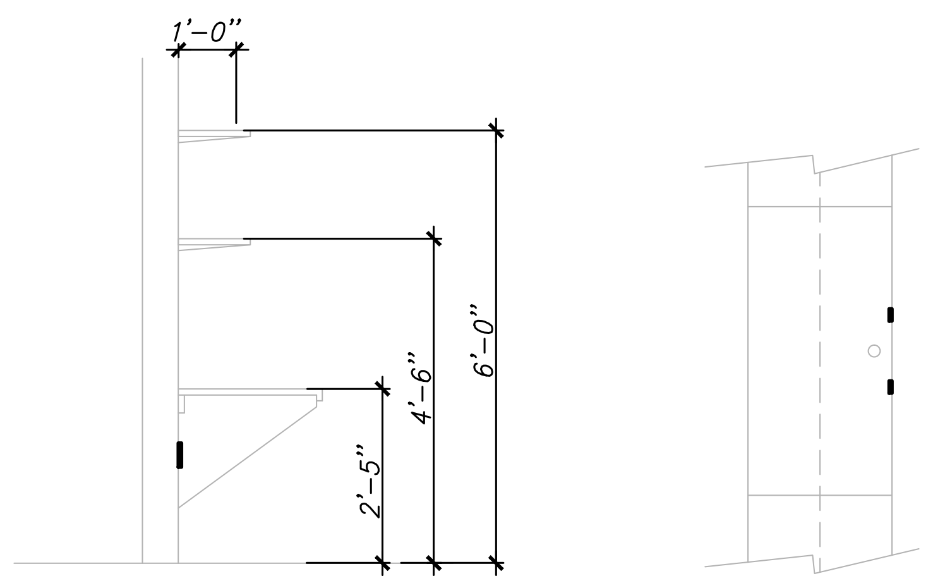
3/8" = 1'–0"


(2) 1"C. CONDUITS
COLOR MATCH MONITOR
(1) DUPLEX FOR TINT MACHINE
(1) DUPLEX FOR 1 GAL. SHAKER
(1) DUPLEX FOR 5 GAL. SHAKER
26
25
24
23
53
62
(3) DATA
(1) VOICE
1'–9"
2'–0"
3'–0"
2'–0"
2'–0"
0'–9"
RUN FLEX CONDUIT UNDER BASE BRACKET NEAR UPRIGHT, NOT THROUGH KNOCKOUTS.
PUNCH FACEPLATES INTO BASE BRACKET

(2) ISOLATED GROUND
(2) NORMAL POWER
(3) DATA & (1) VOICE

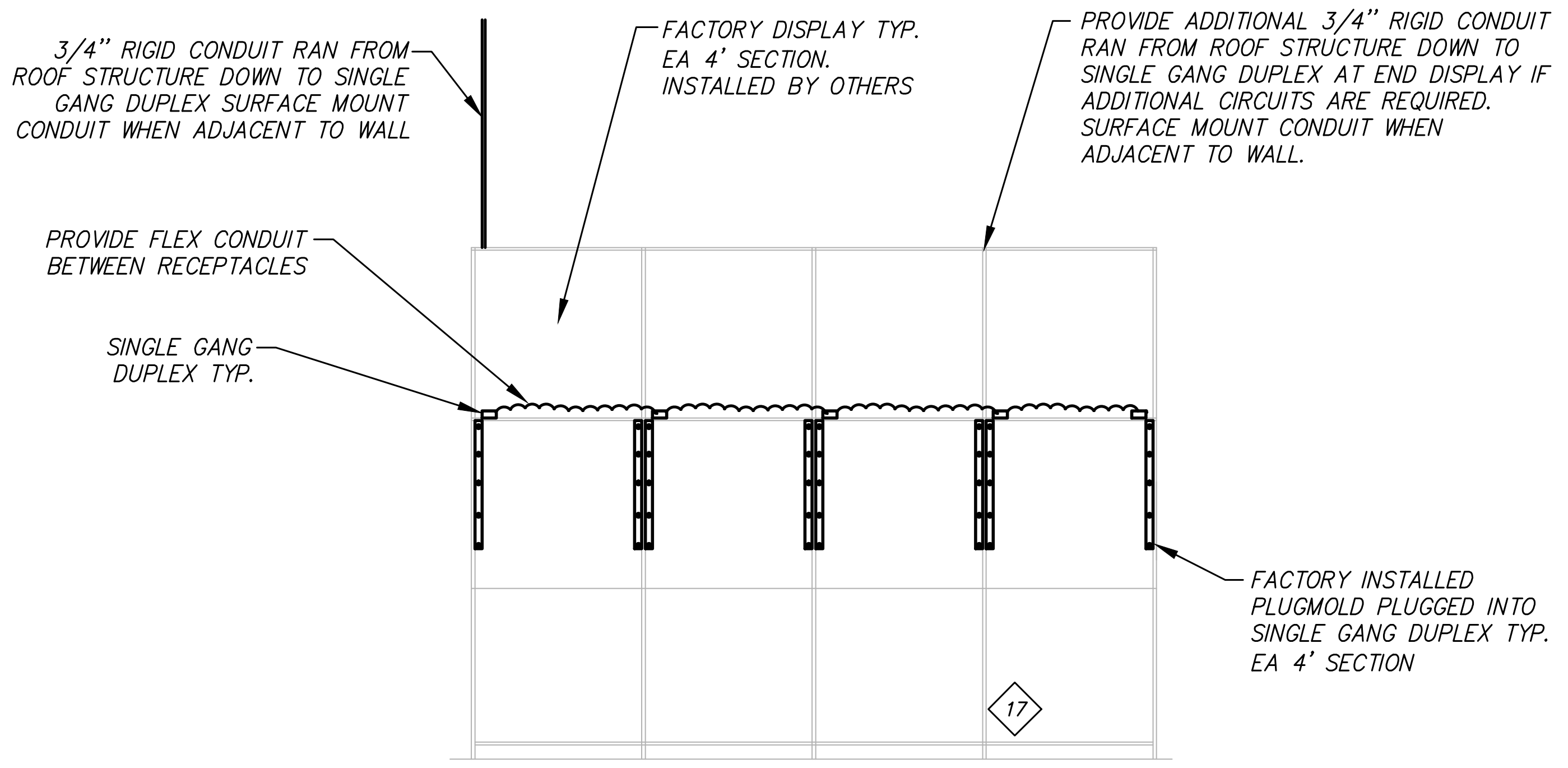
C PAINT EQUIPMENT

3/8" = 1'–0"



L OFFICE DESK

3/8" = 1'–0"


3/4" RIGID CONDUIT RAN FROM ROOF STRUCTURE DOWN TO SINGLE GANG DUPLEX SURFACE MOUNT CONDUIT WHEN ADJACENT TO WALL
FACTORY DISPLAY TYP. EA 4' SECTION. INSTALLED BY OTHERS
PROVIDE ADDITIONAL 3/4" RIGID CONDUIT RAN FROM ROOF STRUCTURE DOWN TO SINGLE GANG DUPLEX AT END DISPLAY IF ADDITIONAL CIRCUITS ARE REQUIRED. SURFACE MOUNT CONDUIT WHEN ADJACENT TO WALL.
PROVIDE FLEX CONDUIT BETWEEN RECEPTACLES
SINGLE GANG DUPLEX TYP.
FACTORY INSTALLED PLUGMOLD PLUGGED INTO SINGLE GANG DUPLEX TYP. EA 4' SECTION
17

H WALL MOUNT LIGHTING

1/4" = 1'–0"

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BID DOCUMENTS

9/24/14

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GRANADA HILLS, CALIFORNIA

ENLARGED DETAILS

	DATE	REMARKS
1	09/25/2014	BUILDING DEPARTMENT SUBMITTAL
2	11/03/2014	BID SET

PM/ENG:	RP/JS
DRAWN BY:	RP
JOB NO.:	SNR14–0037–00

SHEET
E5.1

11/03/2014 BID SET

ADT Work Plan: Sensormatic Digital Pro·Max

Detector Overview

The Digital Pro·Max and Digital 216 detectors deter theft by activating an alarm when they detect the unique response of an active Ultra·Max hard plastic tag or disposable label.

To detect a tag, the antennas emit a magnetic field close to the tag's natural frequency, causing the tag to vibrate or "ring" at the frequency of the field.

Once the field is removed, the tag's energy exponentially rings down at it's own natural frequency. It is this ring down that is detected and analyzed to determine if an alarm should be activated.

Detector Components

Digital Pro·Max pedestal: Controlled by the controller, this floor-standing pedestal contains the transceiver (Tx/Rx) antenna and associated tuning circuitry. The pedestal also an alarm light, speaker, laptop connection, transmit inhibit key switch, and status LEDs. The pedestal is available in a version suitable for outdoor use. In some configurations, Digital Pro·Max pedestals are used as receivers (Rx) only.

Digital 216 Controller: The controller, which powers and controls the operation of the detector, is typically placed out of the way on a wall or shelf. The controller supports two transceiver antennas, two auxiliary receiver antennas, two noise cancellation antennas, a Remote Alarm, a Relay Output port, a Beacon Lamp Port, a RS485 port, and General I/O ports.

Installation Requirements

Verifying Equipment and Unpacking

Verify that all equipment has arrived. Make sure the system configuration is the right one for the installation site.

Unpack major components in a back room. At the install site, lay out parts in the order you will need them. Do not clutter the aisle or cause a trip hazard.

Installer/Contractor

Shall have electrical work comply with the latest national electrical code, national fire code, and all applicable local codes and ordinances.

Shall coordinate all work with other trades to avoid interference.

Shall verify existing site conditions and coordinate with with the owner's representative and appropriate utilities as required.

Shall obtain copies of all related plans, specification, shop drawings and addenda to schedule and coordinate related work.

Shall thoroughly review the project to ensure that all work meets or exceeds the above requirements. Any alleged discrepancies shall be brought to the attention of ADT.

Chemical Interaction

WARNING!
DO NOT install this product in hazardous areas where highly combustible or explosive products are stored or used.

Detector Placement and Cabling

WARNING!
Risk of Electric Shock! If the pedestal must be left unattended during installation, turn off the power or cover high voltage components so that no unauthorized person has access to hazardous voltages.

DO NOT share the ac source with neon signs, motors, computers, cash registers, terminals, or data communications equipment.

DO NOT use orange-colored outlets dedicated for computer equipment.

The ac source must be a 3-wire, 24-hour, unswitched outlet with less than 0.5Vac between neutral and ground.

If a power cord is used, select the appropriate power cord based on the country and rating.

Whenever possible, keep the antennas at least 2.4m (8') away from noise sources such as computer monitors, TV's, switching power supplies, and neon displays.

Do not position pedestals more than 2.7m (9').

Minimum distance between pedestals is 1.2m (4').

Maximum cable distance from the pedestals to the controller is 15.2m (50').

Maximum cable distance from the controller to each alarm unit is about 7.6m (25')

Minimum cable distance from the pedestals to the controller is 3m (10').

Make Tx/Rx cables the same length, if possible.

Pedestal cables are rated for direct burial without conduit. However, state and local codes may require conduit. In addition, some codes require the conduit be stubbed a specific distance above the floor.

Electrical Interference

Detector operation can affect or be effected by other electronic equipment.

The detector generates magnetic field bursts that can interfere with automatic door operators, magnetic readers, and access control devices. These fields also can distort nearby CRT screens; LCD and LED displays are not affected.

Detector operation can be affected by electronic equipment such as microwave proximity sensors used for automatic doors, computer monitors, variable frequency drives (VFDs), solid-state ballasts, and ATM machines.

Specifications

Electrical
Power Supply (None-European Controller)

Primary Input:	110-120Vac or 220-240Vac @ 50-60hz
Primary Power Fuse	5A, 250V, slo-blow, hi-breaking
Current Draw	3.5Arms
Input Power	<350W

Transmitter

Outputs	2 ports
Operating Frequency	58kHz (±200hz)
Transmit Burst duration	1.6ms
Transmit Current	16A peak
Burst Repetition Rate:	
Based on 50Hz ac	75Hz or 37.5Hz
Based on 60Hz ac	90Hz or 45Hz
Transmit Coil Resistance	1.6 ohms (±5%)

Receiver

Inputs	4 ports
Center Frequency	58kHz
Receive coil Resistance	1.6 ohms (±5%)

Alarm

Alarm Relay Output	DPDT contacts
Contact Switching Current	1.0A max.
Contact Switching Voltage	28V max.
Lamp/Audio Duration	1-10 sec. (1 sec. increments)

Environmental

Ambient Temperature	0° to 50°C (32°-122°F)
Relative Humidity	0 to 90% non condensing

Mechanical
Digital Pro·Max Pedestal

Height	159cm (62.5")
Width (pedestal)	68cm (26.75")
Width (base shroud)	72cm (28.5")
Depth (base shroud)	10cm (4")
Weight	12.6kg (27.5 lb.)

Digital 216 Controller

Length	50.7cm (20")
Width with bracket	37.7cm (14.8")
Width without bracket	32.6cm (12.8")
Height	15.0cm (5.9")
Weight	8.6kg (19.0 lb.)

Tools and Equipment Required

For all Digital Pro·Max installations:

Plastic sheeting at least 0.15mm (6 mil) thick (to protect nearby items from dust)

Permanent marker and/or pencil

Floor saw

Hammer drill with 6.5mm (1/4") and 9.6mm (3/8") masonry drill bits

Power drill with 1.6mm (1/16"), 6.5mm (1/4"), and 9.6mm (3/8") drill bits

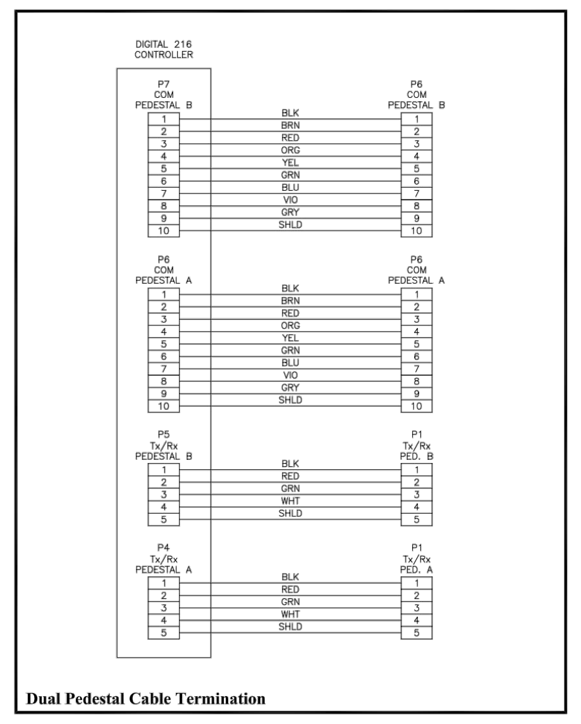
Hammer

Phillips and slotted screwdrivers

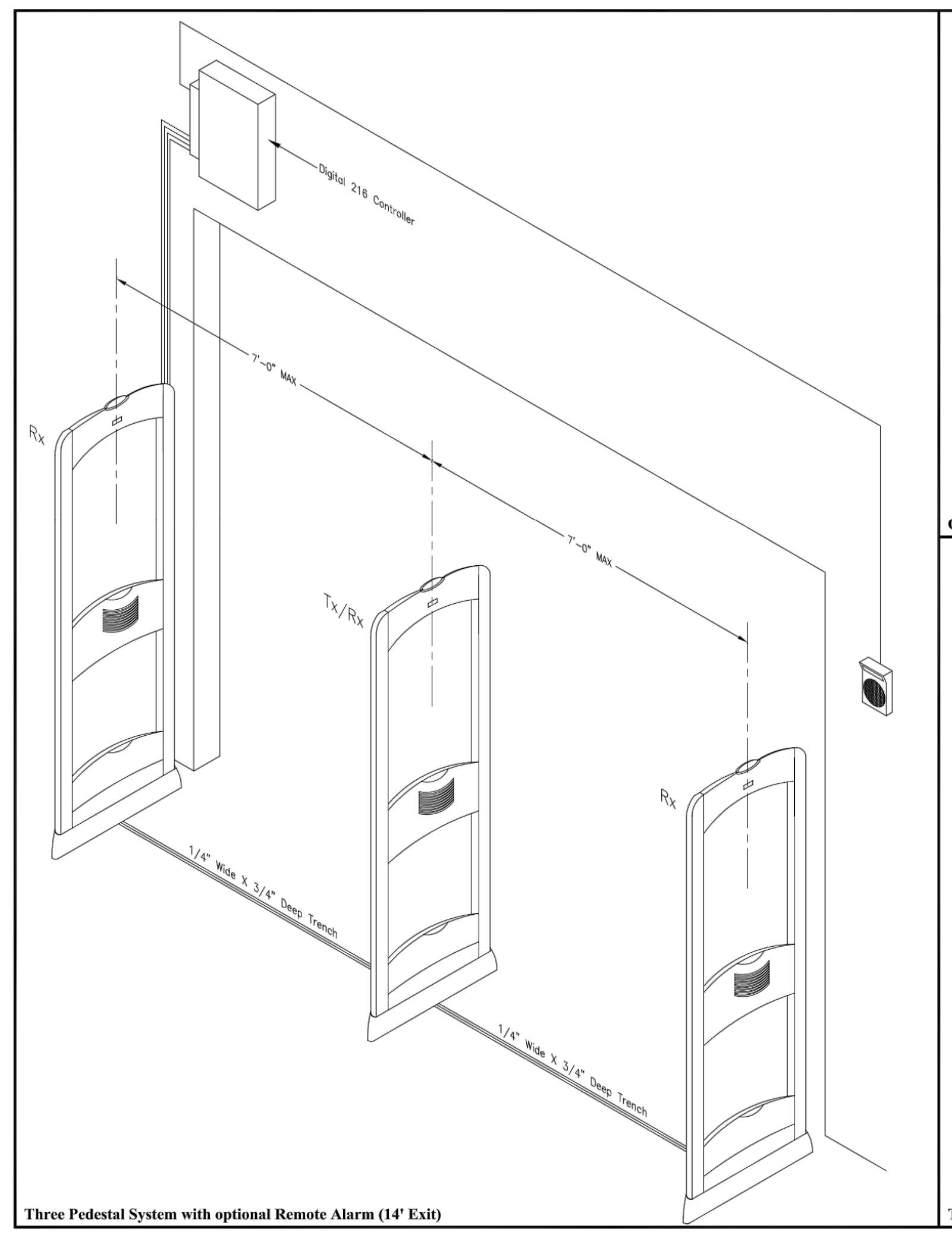
14-16 AWG and 16-22 AWG wire strippers

Ratchet and socket set

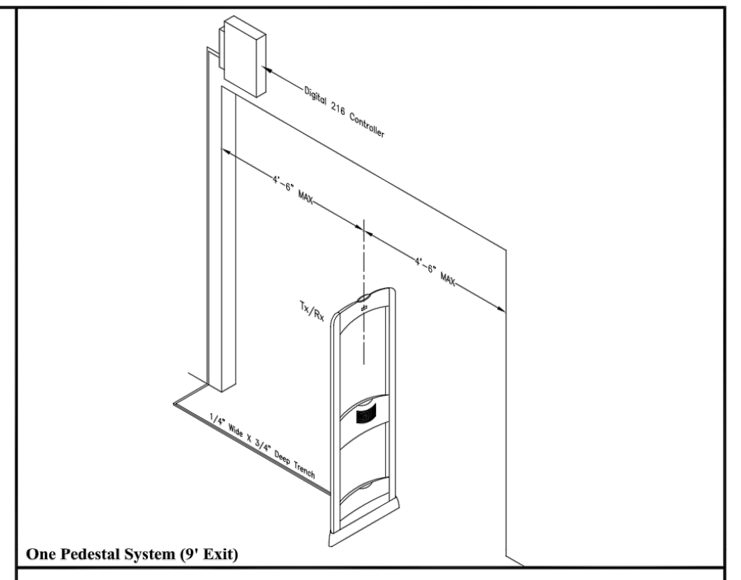
Hand vacuum and broom



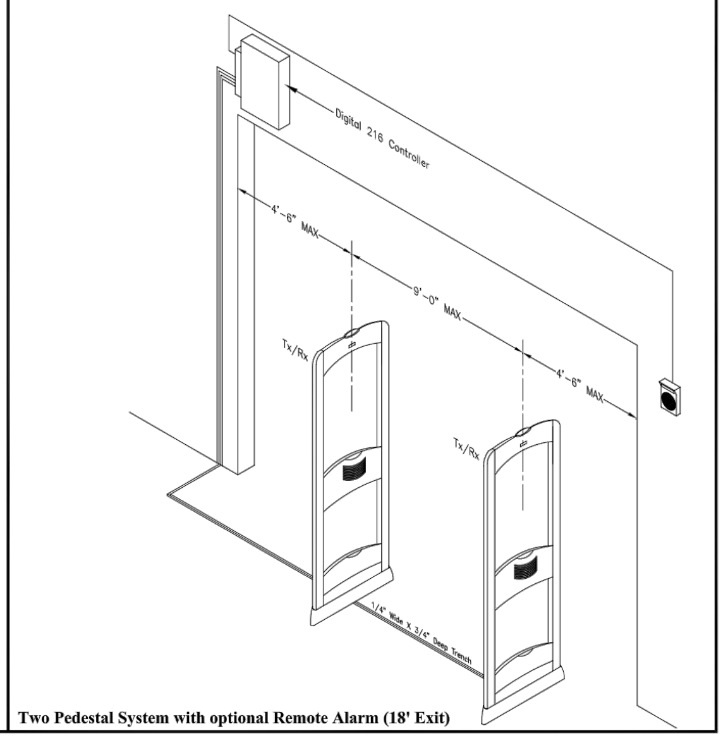
Dual Pedestal Cable Termination



Three Pedestal System with optional Remote Alarm (14' Exit)



One Pedestal System (9' Exit)



Two Pedestal System with optional Remote Alarm (18' Exit)

Description	Product Code
Digital Pro·Max Indoor	ZSDPM
Digital Pro·Max Outdoor	ZODPM
Digital Controller	ZED216
Remote Alarm	ZC30/ZC35
Power Cord Option	0351-2179-XX

Reference Material	Part No. and Revision
Digital Pro·Max Pedestals	8000-2693-03 D
Digital 216 Controller	8000-2693-02 E
Digital 216 Detector	8000-2693-01 B
Digital 216 Remote Alarm	8000-2693-14 B

Please do not start installation prior to reading all boxes

Revisions

Sensormatic

5A

Sensormatic Ultra·Post

Detector Overview

The Ultra·Post II detector deters theft by activating an alarm when it detects the unique response of an active Ultra·Max® hard plastic tag or disposable label.

Detector Configurations

A primary pedestal alone, a primary and a secondary pedestal, or a primary pedestal and Ranger antennas can be configured to cover different exit widths and to adapt to different architectural requirements.

Single pedestal. One primary pedestal provides up to 0.9m (3') of coverage. In certain situations, the pedestal can protect two side-by-side exits.

Dual Pedestal. One primary and one secondary pedestal are connected together to protect an exit up to 1.8m (6') wide.

Primary pedestal/Ranger Antennas. One primary pedestal and two Ranger ferrite receiver antennas are connected together to protect and exit up to 1m (3.5') wide.

Multiple pedestal. Two primary pedestals with a secondary pedestal connected to one of the primary pedestals protect an exit up to 3.6m (12') wide.

For coverage beyond these dimensions, a number of primary and secondary pedestals can be used.

Installation Requirements

Verifying Equipment and Unpacking

Verify that all equipment has arrived. Make sure the detector configuration is the right one for the installation site.

Unpack major components in a back room. At the install site, lay out parts in the order you will need them. Do not clutter the aisle or cause a trip hazard.

Installer/Contractor

Shall have electrical work comply with the latest national electrical code, national fire code, and all applicable local codes and ordinances.

Shall coordinate all work with other trades to avoid interference.

Shall verify existing site conditions and coordinate with with the owner's representative and appropriate utilities as required.

Shall obtain copies of all related plans, specification, shop drawings and addenda to schedule and coordinate related work.

Shall thoroughly review the project to ensure that all work meets or exceeds the above requirements. Any alleged discrepancies shall be brought to the attention of Sensormatic.

Chemical Interaction

WARNING!
DO NOT install this product in hazardous areas where highly combustible or explosive products are stored or used.

Detector Placement and Cabling

WARNING!
DO NOT run the Power interconnect cable in the same conduit or raceway. Building codes require that power wiring be separated from other types of wiring.

The ac source must be a 3-wire, 24-hour, unswitched outlet with less than 0.5Vac between neutral and ground.

DO NOT share the ac source with neon signs, motors, computers, cash registers, terminals, or data communications equipment.

DO NOT use orange-colored outlets dedicated for computer equipment.

Select the appropriate power cord based on the country and rating.

Whenever possible, keep the antennas at least 2.4m (8') away from noise sources such as computer monitors, TV's, switching power supplies, and neon displays.

Maximum exit coverage of one primary pedestal is .9m (3')

Maximum distance between the primary pedestal and the ferrite antennas is 1m (3.5').

Maximum cable distance between the pedestals is 10m (33') in case the cable must be routed over the top of doors, etc..

The interconnect cable should be as short as possible for the best exit coverage. Allowing only 6 inches for future servicing. Coverage is reduced by .02 feet for every foot of interconnect cable in excess of 13 feet. Reduce the distance between the pedestals by this amount.

All cable must be concealed in conduit, wiremold or buried in the floor.

Note: Maximum distance between the pedestals is 1.8m (6') measured from pedestal center to pedestal center. Minimum distance between two pedestals is .6m (2') measured center to center.

ZC30-XP/Z35-XP Remote Alarm (if used)

Plug the transformer used to power the alarm into a 24-hour, unswitched outlet.

Maximum cable distance from the primary pedestal to each alarm is about 7.6m (25').

Specifications

Electrical
Power Supply (Switched Mode Transmitter)

Primary Input:	110-120Vac or 220-240Vac @ 50-60hz
Primary Power Fuse	3A, 250V slo-blow
Current Draw	2.0A peak
Input Draw	<180W

Transmitter (Switched Mode Transmitter)

Outputs	1 port (two antennas Multiplexed)
Operating Frequency	58 or 60kHz (±200hz)
Transmit Burst duration	1.6ms
Transmit Current	16A peak
Burst Repetition Rate:	
Based on 50Hz ac	37.5Hz (Normal)
	75Hz (Validation)
Based on 60Hz ac	45Hz (Normal)
	90Hz (Validation)
Transmit Coil Resistance	1.6 ohms (±5%)

Receiver

Inputs	1 port (two antennas, multiplexed)
Center Frequency	58 or 60kHz
Receive coil Resistance	1.6 ohms (±5%)

Alarm

Alarm Relay Output	DPDT contacts
Contact Switching Current	1.0A max.
Contact Switching Voltage	28V max.
Lamp/Audio Duration	1-30 sec. (1 sec. increments)

Environmental

Operating Temperature	0° to 50°C (32°-122°F)
Relative Humidity	0 to 90% non condensing

Mechanical
Primary Pedestal

Height	145cm (57")
Width	41cm (16.1")
Depth (base)	11.5cm (4.5")
Weight	12.6kg (27.5 lb)

Secondary Pedestal

Height	145cm (57")
Width	41cm (16.1")
Depth (base)	11.5cm (4.5")
Weight	10.6kg (23 lb)

Ranger Antenna

Height	24cm (9.5")
Width	3.8cm (1.5")
Depth (base)	8cm (3")
Weight	0.5kg (1 lb)

Tools and Equipment Required

6 mil (min.) plastic sheeting (to protect nearby items from dust)

Permanent marker and/or pencil

Floor saw

Hammer drill with 1/4", 3/8", and 1/2" masonry drill bits

Power drill with 1/16", 1/4", and 3/8" drill bits

Hammer

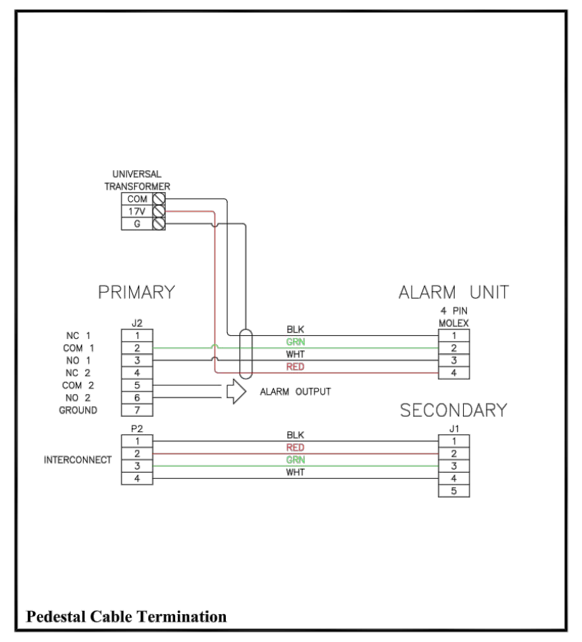
Phillips and slotted screwdrivers

Ratchet and socket set

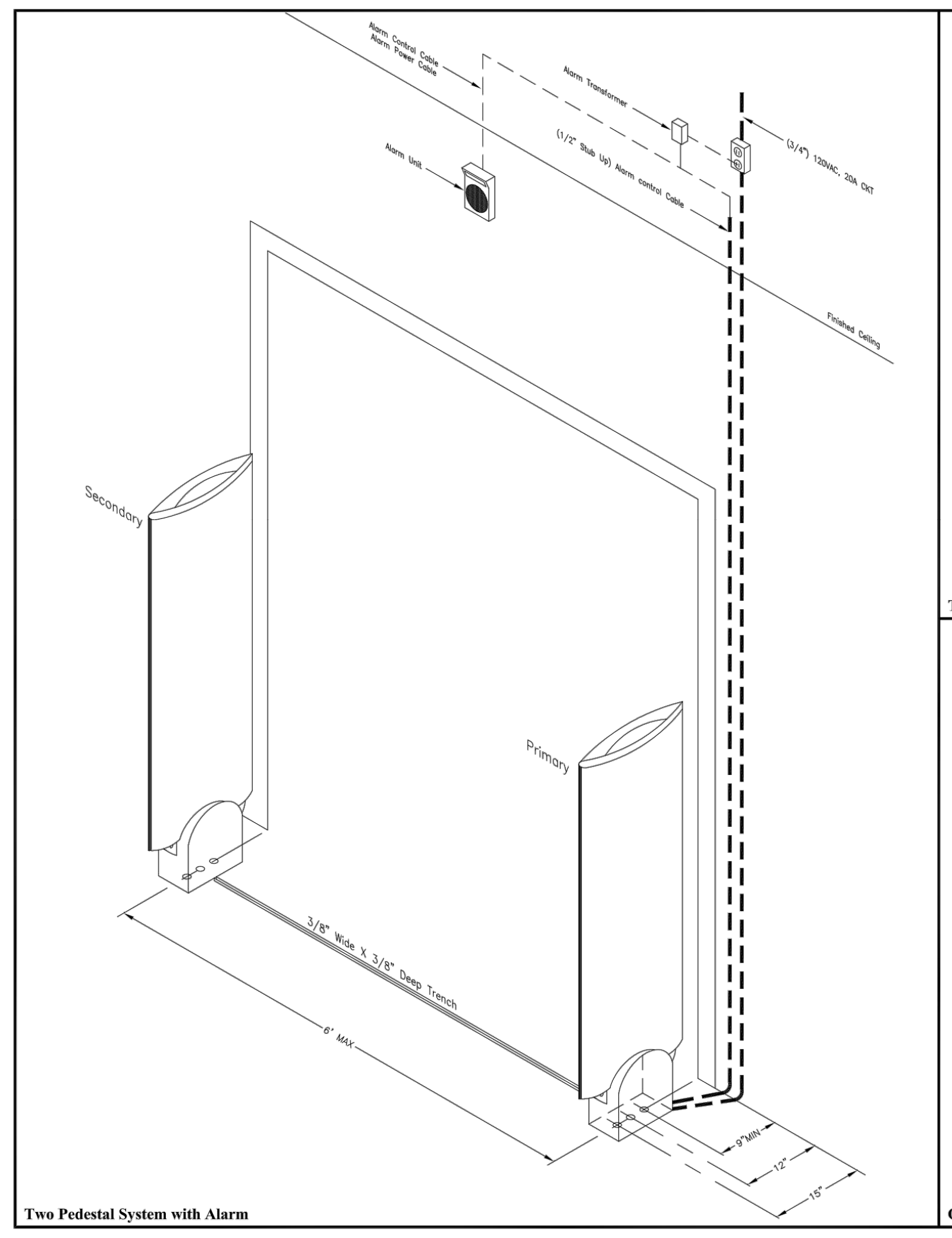
Utility knife

Level

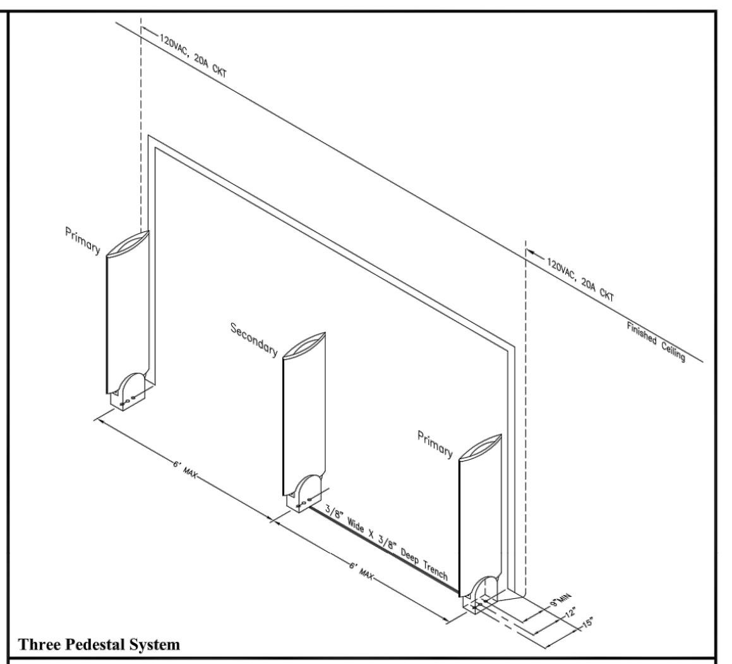
Hand vacuum and broom



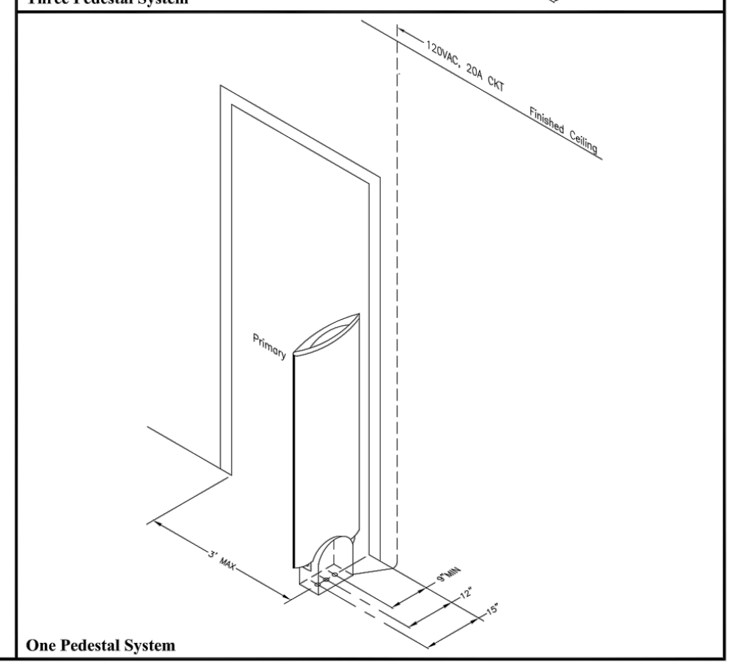
Pedestal Cable Termination



Two Pedestal System with Alarm



Three Pedestal System



One Pedestal System

Description	Product Code
Ultra·Post II Primary	ZAUPMH2
Ultra·Post II Secondary	ZAUPSH2
Ultra·Post Crash Kit	0100-1089-01
Ultra·Post Master Portable Base	0100-1099-01
Ultra·Post Alarm Counter	ZPCOUNT
Ultra·Post Remote Alarm	ZC30-XP/ ZC35-XP
Ultra·Post Shield	ZPUPSHLD

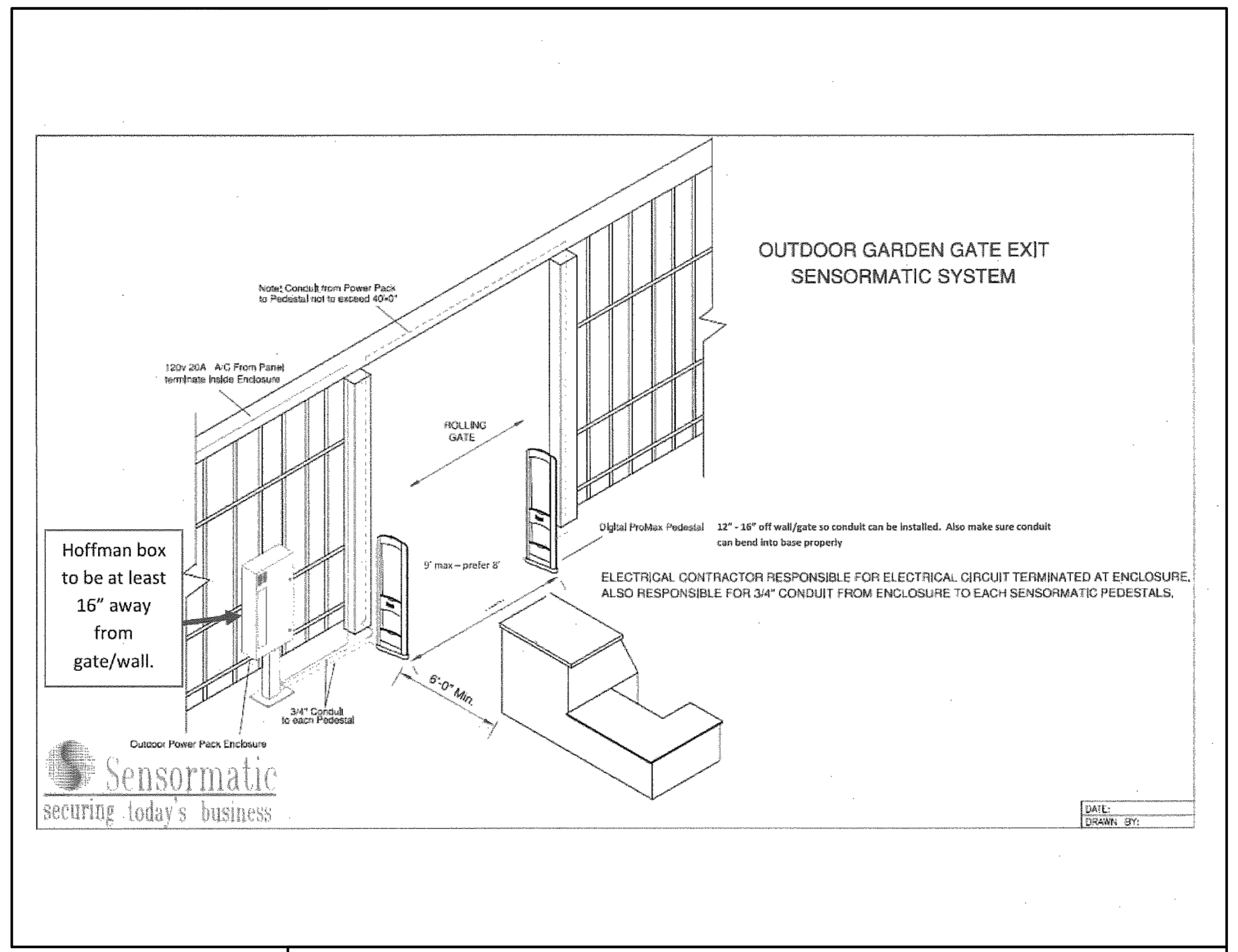
Reference Material	Part No. and Revision
Ultra·Post EAS Detector	8000-2595-08 C
Ultra·Post Ferrite Antennas	8000-1718-01 A
Ultra·Post Power Adapter	8000-1716-01 A
Ultra·Post Ranger Antennas	8000-1947-01 A
Ultra·Post Secondary Pedestal Interconnect Cable	8000-2575-01 B
Ultra·Post Shield	8000-2595-09 A

Please do not start installation prior to reading all boxes

Revisions

Sensormatic

5C


OUTDOOR GARDEN GATE EXIT
SENSORMATIC SYSTEM
Note: Conduit from Power Pack to Pedestal not to exceed 40'-0"
120v 20A A/C From Panel terminate inside Enclosure
ROLLING GATE
Digital ProMax Pedestal
9' max – prefer 8'
6'-0" Min.
3/4" Conduit to each Pedestal
Outdoor Power Pack Enclosure
Sensormatic
securing today's business
DATE:
DRAWN BY:

Hoffman box to be at least 16" away from gate/wall.

12" - 16" off wall/gate so conduit can be installed. Also make sure conduit can bend into base properly

ELECTRICAL CONTRACTOR RESPONSIBLE FOR ELECTRICAL CIRCUIT TERMINATED AT ENCLOSURE. ALSO RESPONSIBLE FOR 3/4" CONDUIT FROM ENCLOSURE TO EACH SENSORMATIC PEDESTALS.

NURSERY DEPARTMENT
OUTDOOR DUAL DIGITAL PROMAX WITH AN OUTDOOR ENCLOSURE (HOFFMAN BOX)

NURSERY DEPARTMENT CUSTOMER ENTRANCE/EXIT DOORS ARE 6' WIDE

CENTER ¾ CONDUIT STUB OUTS FOR EACH PEDESTAL AT 6'3" AT THE ENTRYWAY. PLACE EACH CONDUIT STUB OUT AT 26" FROM THE WALL LINE. CONDUIT STUB OUTS MUST BE ALIGNED WITH EACH OTHER TO ENSURE CORRECT INSTALL OF EACH PEDESTAL

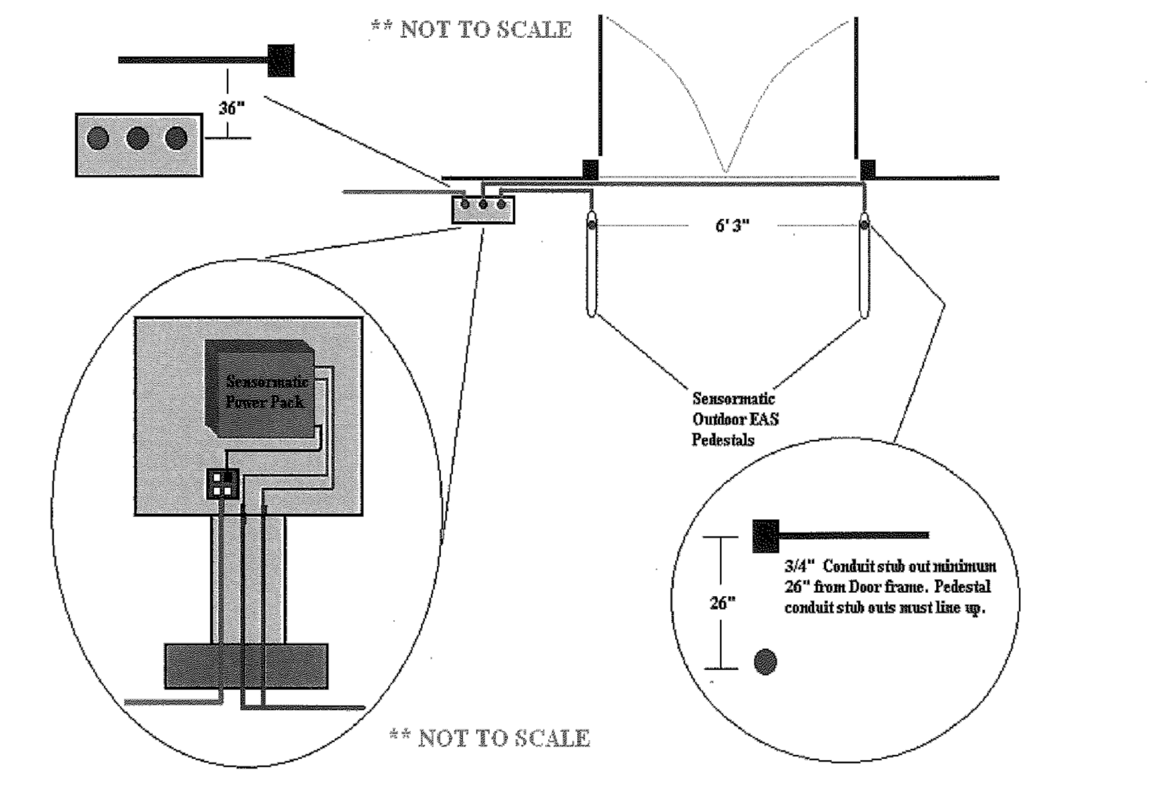
EACH STUB OUT WILL BE ROUTED TO THE HOFFMAN BOX AT APPROXIMATELY 36" FROM THE WALL LINE TO STUB OUT.

3 STUB OUTS WILL COME OUT AT 36" FROM THE WALL LINE:

TWO CONDUITS FROM THE 2 PEDESTALS
ONE FOR THE ELECTRICAL

EACH PEDESTAL NEEDS A 36" RADIOUS TO PREVENT INTERFERENCE AND FALSE ALARM
HOFFMAN BOX WILL BE AT LEAST 36" RADIOUS FROM THE NEAREST PEDESTAL OR CASH REGISTER

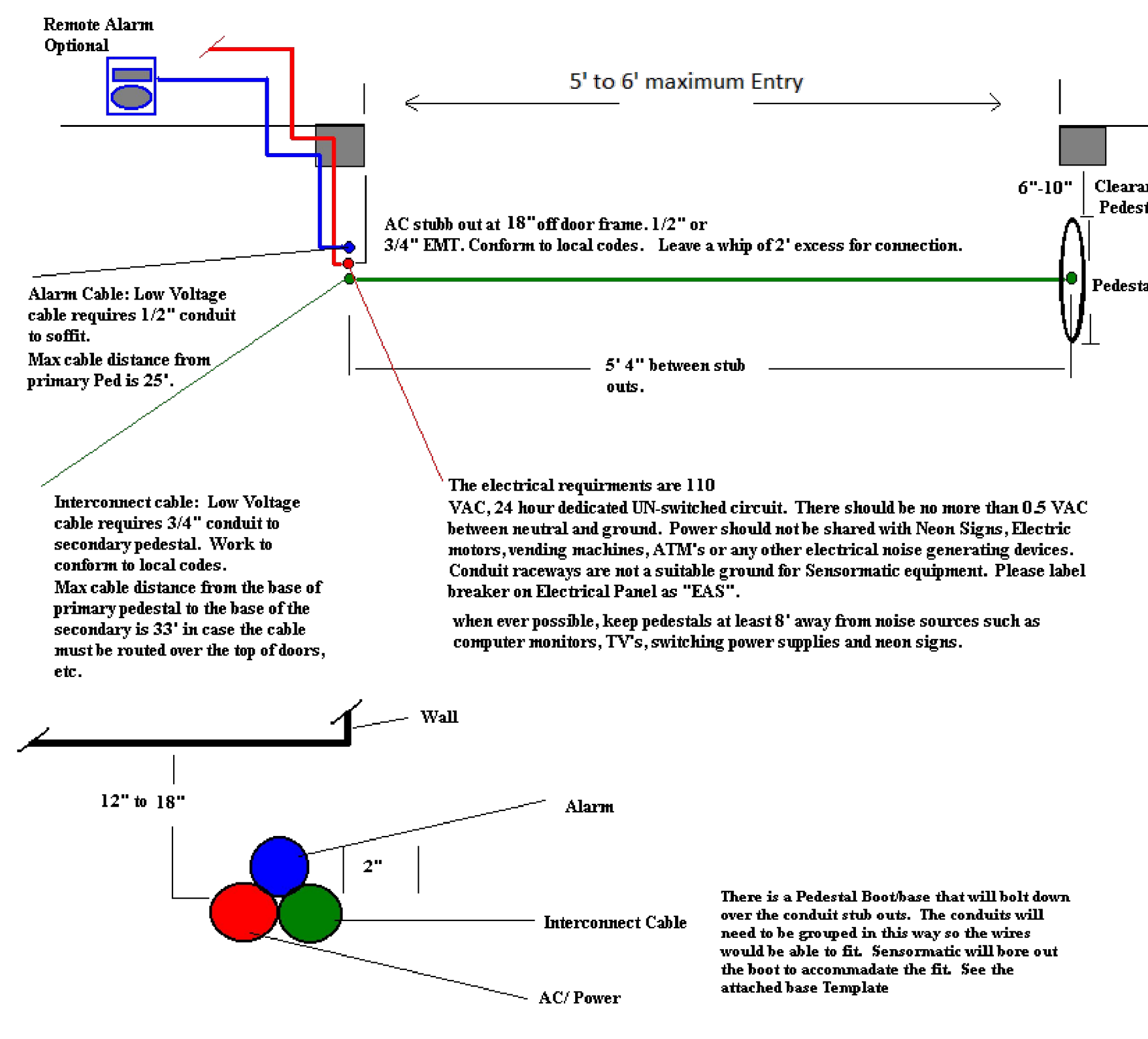
PER PREVIOUS DISCUSSION WITH OSH STORE PLANNING AND ONSITE GC, THE ROUTING OF THE CONDUIT, ELECTRICAL AND THE POURING OF THE CONCRETE WILL BE PROVIDED BY OSH.



3/4" Conduit stub out minimum 26" from Door frame. Pedestal conduit stub outs must line up.

5B

ULTRA POST EAS



AC stubb out at 18" off door frame. 1/2" or 3/4" EMT. Conform to local codes. Leave a whip of 2' excess for connection.

Alarm Cable: Low Voltage cable requires 1/2" conduit to soffit.
Max cable distance from primary Ped is 25'.

Interconnect cable: Low Voltage cable requires 3/4" conduit to secondary pedestal. Work to conform to local codes.
Max cable distance from the base of primary pedestal to the base of the secondary is 33' in case the cable must be routed over the top of doors, etc.

The electrical requirments are 110 VAC, 24 hour dedicated UN-switched circuit. There should be no more than 0.5 VAC between neutral and ground. Power should not be shared with Neon Signs, Electric motors, vending machines, ATM's or any other electrical noise generating devices. Conduit raceways are not a suitable ground for Sensormatic equipment. Please label breaker on Electrical Panel as "EAS".

when ever possible, keep pedestals at least 8' away from noise sources such as computer monitors, TV's, switching power supplies and neon signs.

There is a Pedestal Boot/base that will bolt down over the conduit stub outs. The conduits will need to be grouped in this way so the wires would be able to fit. Sensormatic will bore out the boot to accommadate the fit. See the attached base Template

ELECTRICAL SPECIFICATIONS:

Primary Output: 100-120 VAC
@ 50-60Hz.

Primary Power Fuse: 3A, 250V slo-blow

Current Draw: 2.0A peak

Input Power: <180W

PEDESTAL

Height: 145cm (57")
Width: 41cm (16.1")
Depth (Base): 11.5cm (4.5")
Weight (Pri): 12.6kg (27.5lbs)
Weight (Sec): 10.6kg (23 lbs)

Pedestal foot print: 9" x 4.5"

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ENLARGED EAS DETAILS

	DATE	REMARKS
1	09/25/2014	BUILDING DEPARTMENT SUBMITTAL
2	11/03/2014	BID SET

PM/ENG:	RP/JS
DRAWN BY:	RP
JOB NO.:	SNR14-0037-00

SHEET
E5.2

11/03/2014 BID SET